

PLAY MATERIALS OF ORISSA

A MANUAL FOR TEACHERS

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Project Team

Project Director

Mrs Inderjit Khurana

Principal

'RUCHIKA'

Nursery School Bhubneshwar

Investigators

Mr D K Mishra

Mr S K Dubey

Ms Raka Mohanty

EDITING

G.C.UPADHYAY

COVER DESIGN

ANIMESH ROY

FOREWORD

Early childhood years, spanning 0-6 years of age, are vital to child's future growth and development. Deprivation of any kind at this stage may produce long lasting effect on child's personality. Early childhood care and education programme has the potential to provide opportunities for young children to grow normally according to their interests and abilities. It has added significance for those children who belong to the disadvantaged sections of society.

As the programme of early childhood education is focussed around play, its success largely depends upon the quality and quantity of play materials available and their effective use by teachers of young children in an ECE centre. Paucity of suitable play materials having relevance to children's socio-cultural environment has been always a problem. The present play material manual is a step towards dealing with this problem. The manual is one of the outcomes of the play Material Manual Project launched in the States by the Children's Media Laboratory in the Department of Pre-School and Elementary Education, NCERT.

I would like to acknowledge with thanks the contribution of Mrs. Inderjit Khurana, Principal, Ruchika School, Bhubaneswar in collaborating with us and taking up the responsibility to conduct the survey in Orissa. I also acknowledge the valuable efforts made by Prof. (Mrs.) R. Muralidharan In-charge CML-ECE project and Head Department of Educational Psychology Counselling and Guidance in launching this project and guiding it. The financial support given by UNICEF is gratefully recorded.

I hope that this Manual will be of great help to all those who work for young children in organising play activities more effectively.

K. Gopalan
Director

National Council of Educational
Research and Training
New Delhi 110016

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PREFACE

The play material manual project was launched in the States with the objective of exploring the rich heritage of children's play materials and games and documenting the available materials for the use of teachers of pre-schools, primary schools and anganwadi workers in organising suitable play activities for young children. The task of collection and compilation of play materials available in the State of Orissa was entrusted to Mrs. Inderjit Khurana, Principal, RUCHIKA Nursery School, Bhubaneswar. Before the survey of play materials commenced, a seminar was organised in the Regional College of Education, Bhubaneswar with the participation of various agencies including Government Departments of Education, Department of Industries, Handicraft Board, State Bank of India, teachers and members of State Council of Educational Research and Training (SCERT), Bhubaneswar. With the help of a proforma developed by NCERT and supplied to survey team, collection of play materials and games in the State was accomplished. More than 400 toys were collected. These toys are presented in the Manual classifying them as animal toys, birds toys, masks, house play material, story telling aids etc.

It is my belief that toys and games thus collected and documented will not only be used by teachers of young children as resource material to build up activities for young children but will also ensure cultural relevance in the teaching learning in our schools.

Prof. R.Muralidharan I/C. ECE-CML deserves all credit for having initiated this project and thereafter ably guided the project in States/UTs to its successful completion. Thanks are due to Mrs. Inderjit Khurana for her help in survey and compilation of available play materials in the State of Orissa. I would also like to extend my thanks to all those agencies, persons who were involved in this task at the state level. Last but not the least, I would like to thank Dr. G.C.Upadhyay, Lecturer, for preparing the press copy and coordinating the activities for bringing out this manual.

P.N. Dave
Head,

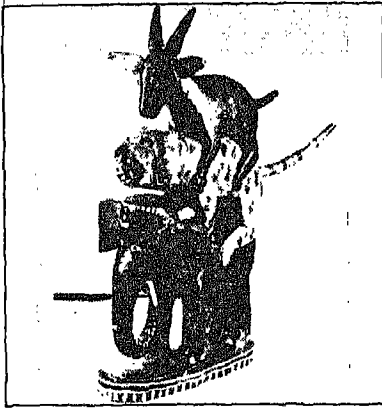
Department of Pre-school and
Elementary Education
National Council of Educational
Research & Training
New Delhi 110016

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INTRODUCTION



It is an established and accepted fact that the years spanning the age 0-6 are one of intensive learning and by the age of 8 years the major part of a child's mental development has taken place. It is during this vital period in a child's life that the foundations of his/her education are laid, the seeds of harmonious development and later success are sown. The broad objective of education at this stage for all nations and all peoples is to provide every child, irrespective of differences in colour, caste, creed, social status, equal opportunity to develop and succeed. The aim of pre-primary and primary education is to ensure that the child's physical,

intellectual, emotional and social development takes place unhampered, that is, to ensure that the child learns to move independently, to communicate with other people, to understand creatures and machines, to dress and feed himself, to behave correctly in one's home and neighbourhood. It is through the medium of play, he/she investigates the world and builds up a repertoire and understanding of what exists in his/her environment. He/She understands the complexities of the outside world through games, exercise, activities, songs, music, dance etc., and learns the skills necessary to adjust.

Play is a spontaneous activity characterised by freedom and the pleasure it provides. It is unlimited in scope, diversity and duration. It is the most natural and powerful educator in the formative and impressionable childhood years. Learning during this period is not confined to classrooms and desks but is taking place all the time as the child plays, experiments, explores his/her environment, imitates and develops behaviour patterns, language and motor skills. Play is therapeutic too, in that it helps the child to release his/her excessive energy, pent-up emotions and tensions as well as identify and solve problems.

Play follows a definite pattern of development associated approximately with a particular age group. Every age requires different types of play materials. They form the realm of fantasy, of make-believe in which the child dwells. It is in the early stages of play that toys take the centre of the stage in child's activities, reaching a peak between 7-8 years. Interest in toys thereafter shows a gradual decline as other forms of play come into focus. It follows naturally that play and

toys should figure prominently in all pre-school and primary school learning situations. Curriculum must be devised keeping the interests of the child and his/her developmental pattern in view.

Imaginative toy materials, their suitability for the age concerned, attractive appearance, durability, safety, flexibility of use and easy handling have to be kept in mind when such a curriculum is introduced. As the child takes apart, puts together, touches, discusses, discards and assimilates he/she is using the play time for purposeful learning.

Toys are interesting play things, miniature versions of articles and objects used or useful in everyday life. They provide experiences and help the child adapt to his/her immediate environment, to teach himself/herself some basic concepts, clarify his/her ideas and straighten out knotty problems. They must therefore be such as to encourage the child to freely examine, test and use in a variety of ways. The child's imagination allows him to use one toy in a number of ways e.g. large blocks can be used to build vertical towers, trams, a doll's bed or a stool for sitting.

Timely guidance and assistance by a responsible adult will sustain or enhance a child's interest during free play. On the other hand organised and controlled play activities will emphasise different aspects of learning - cognitive, language, emotional and social growth.

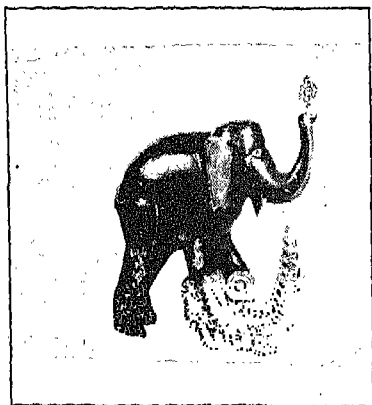
Selection of toys, therefore, is of primary importance. Selection should be made according to age of the children and also the gaps and deficiencies that may exist. Abundant nature, prolific in its provision of natural play materials like sand, water, plants, stones, birds, fruit, flowers, shells, feathers, pebbles, can be judiciously used to provide learning experiences. To this can be added articles made by the village community—baskets, mats, clay models, wood carving, measures, weights etc. Towns in the vicinity may provide interesting junk like bottle covers, bottles, cigarette cartons, match boxes, and tins of different sizes and shapes, discarded newspapers and magazines as well as bits of cloth. Household articles like kitchen utensils, cloth pieces from a tailor's shop, old sarees, etc. can be included to encourage dramatic play. Cheap commercial toys found everywhere can also be included. Sophisticated mechanical toys entrance a child temporarily but since they offer little scope for change, lead to restricted, supervised activity, and reprimands for misuse which spell the end of fun for the child. Thus it no longer remains an object of joy and discovery. There are in the market now, a number of educational toys developed for play-way teaching but unfortunately they exceed the budgetary limits of village schools.

Space to indulge in play activities is essential. A number of free play activities can be organised outdoors except during inclement weather. There should be room for free movement, creative work and display in and around the classroom. Storage space for materials, is of equal significance.

The aim of the project on toy collection in Orissa with its largely agrarian population and its scattered tribal belts was to discover how and with what the children from these areas play, where sophisticated toys have not reached the markets. Secondly, to catalogue all play materials, their availability, durability

and educational potential. Thirdly, to suggest how best the materials collected could be utilized in schools to develop scientific and mathematical concepts and language and cognitive skills while playing. Fourthly, to help convert a dreary, dull and un-interesting school room into a bright and cheerful activity area, providing a wide variety of experiences, humming with the voices of happy children, with an imaginative, alert and responsive adult to care and guide.

PLAY MATERIALS OF ORISSA



This beautiful land of lush green fields, forests, scattered hills, tiny rivulets and mighty rivers has fired the imagination of its people who have produced, since times immemorial, articles of beauty for worship, for their homes and for their children. Temperamentally easy going and easily contented, they use the leisure hours for creative purposes. Every hamlet and each village is involved in fashioning articles from the multiplicity of materials available in their environment, and hence the infinite variety of toys.

Orissa has an unexplored wealth of rural, indigenous toys. There has been an unbroken tradition of folk art and craft including toy craft. Despite innovation and certain modernising trends, toy craft is still linked to its roots in the very remote past as is evident in the work of some rural and tribal artisans. These range from the very primitive toys of the tribals, reminiscent of the Indus Valley civilization to the sophisticated carved and painted ones from the coastal areas. The latter are eloquent examples of the artistic excellence and unrivalled workmanship of the local craftsmen. The bulk of the toys however are samples of folk art each uniquely designed, coloured and irresistibly charming.

Traditional Toys

Tradition lies deep in ethos of the Oriya people. There has been an uninterrupted adherence to older traditions even while assimilating influences from outside. The toy craft of the coastal regions shows evidence of the latter while in western Orissa and the interior regions the old forms and designs are still in existence. Now a days the trend in toy making has changed from play material to a decorative piece. Wooden toys were elaborately carved earlier whereas now there is less carving and a greater accent on painting. While Puri influenced the design of the coastal area, Baragarh did the same for western Orissa. The economy and simplification of forms and the paint application, restricted to primary colours, are the properties of the toys of western Orissa. The elaborate and decorative patterns conforming more to temple art, constitute the general mood of coastal area toys. The painting on these toys are influenced by the 'pata' painting style. Clay toys in Puri are totally

traditional, but in Cuttack, modern and realistic art form influence can be detected.

Toy craft too is a family tradition, like other arts, and is passed from parents to children. All the toys are not for play. Many have only decorative value and are invaluable pieces of art. Most of the traditional toys are forms of life-animals, birds, fish, reptiles, as well as images of Gods and Goddesses, dolls, dollhouses, utensils and so on. A few families are involved in this craft all round the year and it is their means of livelihood. With declining sales a greater number of them are now seeking employment outside.

Festival Toys

In Orissa there is a popular saying "Bara mase tera Jatra" that is, there are 12 months but 13 festivals in the year, but the actual number of festivals far exceeds this. Religion is deeply ingrained in an average Oriya's life. Festivals and rituals are an every day affair. Much of the motivation for and endeavour to create artistic toys and images of deities comes from this. A mela invariably accompanies each festival and is usually in and around the temple. Traditional toy makers flock to the mela with their wares since this has become, over the years an important outlet for the sale of their goods besides village and town hats (markets). But toys are specially made for the festival too. These are usually some musical instruments like phirphiri, trumpets, khanjanis, solopit birds, stuffed birds, small clay toys, dolls, carts, papier mache mask etc. and their prices are very low. Children play an active part in the celebration of each festival whether connected with worship of a deity, family celebration or some local event like harvesting of crops or a family function. A number of festivals are celebrated by and for children or enjoyed by them because of the special activities involved. The following is an account of some of these.

Festivals Involving Children:

Raja Sankranti: Raja sankranti usually in the month of June marks the advent of the rainy season. No one is supposed to walk on the earth, light a fire or plough the fields. The earth is likened to woman menstruating. Swings are set up and young girls spend the whole day swinging, singing special raja songs, playing games, watching gymnastic feasts and eating 'pithas', rice cakes specially made for the occasion.

Pana Sankranti: Pana Sankranti, in April, marks the beginning of the new solar year. On this day a small pot with pana or gur juice is hung on a tulsi plant. children look forward to drinking pana and eating Chhatua and gur. Ghata patara, a dance on stilts, and Jhamu walking on fire are specially performed on the occasion and are exciting events for children.

Bhai Jantia: Bhaijantia falls in October. After puja all the brothers are carried into the house by the mother and sisters. They then give money to the sisters.

Jhulano Purnima: Jhulano Purnima or Janamastami in August is celebrated with fasts by adults, festivities following at night. The children, however, make gaily

decorated cradles in which they place idols of Krishna. They look forward to the special bhog of Laddus made for that day's puja. 'Gotipua nach' performed by boys is particular feature of this festival.

Sambar Dasami: On sambar Dasami day mothers worship the Sun God. They make the children's favourite food. Each one gets a special dish. This is first offered to the Sun God for his blessings and then given to the children.

Prathamastami: Prathamastami (November-December) is celebrated for the well being of the first born. They get new cloths. Special puja is offered to Lord Ganesh to protect them. In some homes however specially in Keonjhar and Mayurbhanj all the family members wear new clothes.

Kumar Purnima: For Kumar Purnima (October) all young girls and boys keep a fast and worship Kartikeya as well as the moon or janha mamu, so that they never lack anything. New clothes and special food - Khoi, sugar and fruits mark the occasion.

Rakhi Purnima: Rakhi Purnima (August) starts with worship of the cow, decorating her, cleaning up the cow sheds and making special 'Pithas' or rice cakes for the cow. Girls then tie rakhis on the wrists of their brothers. In the villages the brahmin brings the rakhis a day earlier and collects his payment in kind.

Bali Yatra: Bali Yatra (December) falls on Kartik Purnima day and marks the departure of traders to far off lands. Children look forward to this day because special boats are made from banana stalks, Deepas (lights) lit in them and set afloat in the river or tank with betel leaf and betelnut in them. Special Baras and Rasagullas are made and sold that day.

Makar Sankranti: Makar Sankranti marks the harvesting time. Special puja is offered to Lord Shiva. Alms are given to the poor to show surplus harvest. Kite flying competitions, Kabbadi matches and Bagudi hold special attraction for the children.

Agira Purnima: On Agira Purnima (February) bonfires are made of hay sprinkled with ghee to celebrate the end of the harvest and the wish for bumper crops next year. Children are active participants.

Dola Purnima: Dola Purnima (March) falls a day before Holi. There is a ritual worship of Radha and Krishna in some areas and some special temples. In the evening Holika the demons of small pox and measles is burnt, to protect the children from these diseases. Holi or the sprinkling of colours is a gay festival for children all over India.

Deepavali: The festival of lights begins with Lakshmi Puja and ancestor worship and sradh for the forefathers. Rolling cotton into wicks and lighting deepas keeps the children busy. Special sweet meats and crackers at night complete the festivities.

Mahalaya Amavasya: On this day the children beg food from the houses of seven relatives or friends and only that food is cooked and eaten in the house. In some districts the houses are spring cleaned and the clay cooking utensils are changed.

Ganesh Puja: (August-September) Ganesh is the God of knowledge and is supposed to remove all obstacles in the way of success. It is celebrated in a big way

throughout the state. Four days before the puja groups of children collect money to buy an image. In the villages the children give gifts, in kind, to the teacher for his maintenance.

Saraswati Puja: Besides worshipping the goddess of learning children in villages tie a garland of flowers to a pole and go in a procession from house to house collecting food grains and other articles of utility for the teacher. Everyone contributes according to his means.

Khudurkuni: Khudurkuni (August-September) all young girls worship Goddess Mangala and fast every Sunday for one month for the long life and well being of their brothers.

Jahni Osha: On this day Goddess Brundabati is worshiped. She is endowed with the power to cure young girls of leprosy and punish unbelieving married women by killing their children; they can be brought to the life only after observing the fast.

Shathi Osha: Goddess shathi is worshiped on the sixth day of the lunar month of Bhadrap (August-September). After the birth of a child, she is credited with the writing of the child's future on its forehead; she rules over the destiny of all children.

All these festivals mean celebration and parents indulge children by buying toys which the village craftsmen bring along. It is the village patron who has kept alive the art of toy making. With the growing lack of patronage, continuance of old designs is more and more difficult and cheap plastic toys flood the market, the traditional toy maker now spends less time on perfecting his art and concentrates on cheaper and saleable goods for festivals and fairs. Hence the concentration on quantity rather than quality. Beautiful toys are still available at order, where the artisan can hope to make monetary gains commensurate with his labour. The opening up of Government handicrafts and design centres may save this dying art.

Commercial Toys:

Toys as an industry is in its infancy in the State. There are toy makers around Puri, Bhubaneswar and Cuttack prominent among whom are Nityananda Bhol and Bhagabat Moharana. Their traditional wooden toys like animals, birds, fish etc. as well as English alphabets, number charts, concepts of big and small, beautiful room divider screens, as a large scale commercial venture, is dependent on export rather than local sales. Some of the Puri toys are very similar to the Chennapatnam toys of Karnataka-brightly painted engines, cars, utensils, merry go rounds etc.

Materials That Can Be Used As Toys:

During the survey we came across an amazing range of materials which are not used as toys presently, but can make fascinating play materials for children. These are the traditional mano or measures and basketry, utensils found in an infinite variety of materials and shapes, handy and interesting to use; hats to protect one from the hot sun are commonly used by the farmer and the children in the fields.

Musical instruments—string, reed and percussion are made in every district and are excellent aids as well as play materials.

Natural Materials: To this can be added all the play materials and teaching aids which the abundant nature in Orissa provides. It only needs an imaginative and dedicated teacher to use these and to motivate the children to play and learn with twigs, feathers, leaves, sand, water etc.

The common materials used for toy making are:

1. Wood (Gambhari, Katarang, Simili, Paldhua, Chaia, and Kansa)
2. Clay
3. Cowdung
4. Golden grass
5. Palm leaf
6. Dhokra or metal casting
7. Horn
8. Papier mache
9. Bamboo and Cane
10. Solopith
11. Stone
12. Metals: Tin, Brass, bell metal, aluminium
13. Betelnut
14. Cloth applique work
15. Painting
16. Shells

Wood: Toys are carved out of the wood which is easily available in the area e.g. Paldhua in Puri and Ganjam, Katarang in Puri and Cuttack. The carved toys of the coastal areas are elaborately painted in the classical Odissi style, fine brush work and minute details. Those of western Orissa are by and large simply carved except at Baragarh and painted in bright primary colours in the folk style of painting. Some wooden toys are left unpainted, while others are simply coloured. In Dhenkanal and Cuttack artisans use lathes to turn out bowls and toys and a host of other items.

Clay: Clay toys are prolific in all parts of the state. The plastic clay is used by potters to make images, pots and toys. Some are sun dried and others are baked. They are either left unpainted or painted with poster colours. Some are given a lacquer finish as in Nowrangpur and Balasore. A number of the clay toys collected namely the horses, and elephants, are really votive images offered to the tree Goddess; tiger and deer are connected with Shiva worship and the dog with Kalbatrava.

Cowdung: Cowdung mixed with clay and little straw is a popular medium for making toys for children. Animals, birds dolls are fashioned out of it by women artisans, sun dried and quaintly painted.

Golden grass: Golden grass growing along the paddy fields is used for making a variety of intricate baskets, mats etc. in various shapes and sizes. The whole stalk is used for the main body while the split stalks are used for binding and weaving patterns.

Palm leaf: Palm leaf is used for basket weaving, umbrellas and hats. Many beautiful samples were collected.

Dhokra: Dhokra is a metal casting made in the lost wax process by the tribals in many districts. A basic clay shape is covered with intricate designs made of bee wax. Another clay mould covers this and is sun dried. A small opening is kept in the outer mould to put in the metal and then baked in a small improvised kiln. The melted metal covers the wax and as it melts takes on the design. The outer cast is then removed to recover the brass mould. These toys are lasting and come in an infinite variety.

Horn: Horn of buffaloes and deer are used for carving beautiful objects like birds and animals, human figures, clips and combs. With the opening of handicrafts centres this work from Paralakhemundi and Cuttack has become popular in other districts also.

Papier mache: Papier mache is a popular medium of toy making. The nodding papier mache toys of Puri are very famous. Masks designed out of papier mache and painted are master pieces of craftsmanship and painting. They represent Gods, Goddesses, animals, birds and human beings. Paper is often mixed with cowdung, as in Koraput, to make modeling easier.

Bamboo and cane: Bamboo and Cane are commonly used for baskets which serve varied purposes. Some of the samples collected are small baskets to hold fish and the bait, some are used as measures. Farmers hats are also woven and commonly worn during the summer and rainy seasons.

Solo Pith: Solo Pith is the core of the branches of a herbaceous bush. When the bark is peeled off the white pith is used for carving animals, birds and making intricate designs for the puja pandals and headgear of deities. Glue is used to fix pieces for the large size toys and decorations.

Stone: Stone carving is very popular and extremely beautiful, but heavy. The toys in the collection are made from soap stone and gray slate which are lighter and can be handled by children.

Metals: Tin, brass, bell metal, aluminium. Large and beautiful tin toys were collected from Binika; tin patterns for printing chalk designs on the floor were collected from Puri. The former were expensive and only samples were picked up. Beautiful brass images are made in Kantile and flexible brass fish in Belaguntha. No sample of the former were collected because of the expense involved. Bell metal bowls and other articles are extremely beautiful and good to play house but too expensive. Aluminium utensils of smaller sizes were however collected for doll play.

Betelnut: Toys carved from betelnut in Aska are exquisite but expensive and only one sample was collected.

Cloth applique work: Pipli work or cloth applique work holds great potential for wall hangings in schools with pictures of animals, birds, numbers and alphabets, but since none were made for this purpose, there is no sample.

Painting: Painting of a high quality (patta chitra) is practised by traditional painters of Orissa. Of interest to us were a set of Ganjappa Cards - small circular cards with beautiful miniature paintings of Gods, men and animals. These can be utilised

to make excellent materials for developing cognitive skills. Though easily available no sample was collected, because they would have to be altered for educational purposes.

Shells: Orissa has a long coastline, and the beaches are littered with a wide variety shells. Shells are joined together with screws or glue, and painted to make exquisite toys in all the coastal districts.

It is difficult to delineate one particular material used for toy making to any one district. In each district almost the same materials are used with a few exceptions. To avoid repetition the detailed description of more than 400 toys collected is neither district nor material wise. It was preferable to categorise them in types e.g. animals, birds, masks, toys for house play, story telling and so on.

The prominent toy making centres of Orissa, district-wise, are:

Cuttack

Cuttack
Kendrapara
Badamba
Tigriya

Kalahandi

Rampur
Junagarh

Boudh-Kandhamala

Phulbani
G-Udayagiri

Puri

Raghurajpur
Khandapara
Banapur
Sakhigopal
Nayagarh
Dasapalla

Ganjam

Belaguntha
Aska
Paralakhemundi
Buguda
Berhampur
Chikitigara

Balasore

Balasore
Lakhamannath
Nilagiri

Koraput

Nowrangpur
Jeypore
Gunupur

Bolangir

Binika
Sonepur
Bolangir

Sambalpur

Barapalli
Baragarh
Deogarh
Gogua

Sundergarh

Ujalpur
Biramitrapur
Sargipalli

Mayurbhani

Baripada
Barbazar
Rasgobindpur

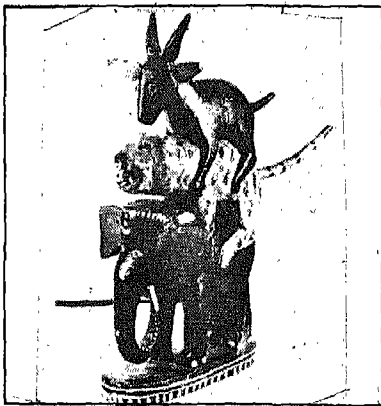
Keonjhar

Barigaon
Kalimati

Dhenkanal

Angul
Hindol
Sadatbarani

DETAILED DESCRIPTION OF PLAY MATERIALS



Play materials available and collected in the State of Orissa have been classified and presented in detail under following heads.

1. Animals
2. Birds
3. Fish, Reptiles and insects
4. House play materials
5. Dolls
6. Fruits and vegetables
7. Toys for environmental studies
8. Mode of transport
9. Wall hangings
10. Religious deities and historical figures
11. Masks
12. Puppets and story telling models
13. Musical instruments
14. Locally available materials for cognitive development
15. Material made out of urban waste

Places where these different type of play materials are found and raw materials used in making these play materials are given below with discription of each item for its local specificity and variations.

1. ANIMALS:

Cow and Bulls

Material used:

Clay, horn, paper, cowdung, tin, wood, lacquer and beads.

Place:

Junagarh, Rampur in district Kalahandi, Baxibariguan in district Keonjhar, Raigarh and Jeypore in district Koraput, Purusotampur in district Ganjam, Puri in district Puri, Binika in district Bolongir, Cuttack in district Cuttack, and Barapali in district Sambalpur.

Cows and bulls made out of clay, some of them are sundried and some of them baked with simple designs on them. They resemble the Indus Valley civilisation.

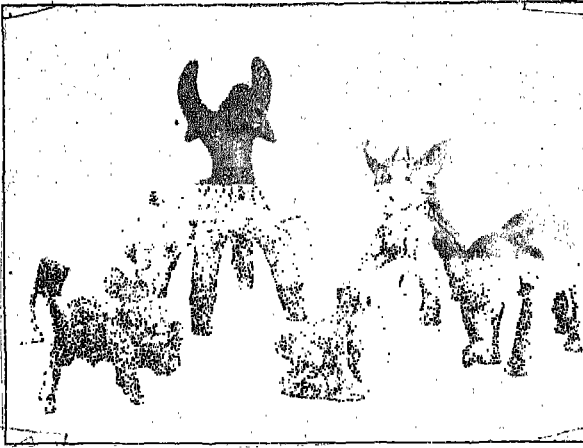


Fig. 1

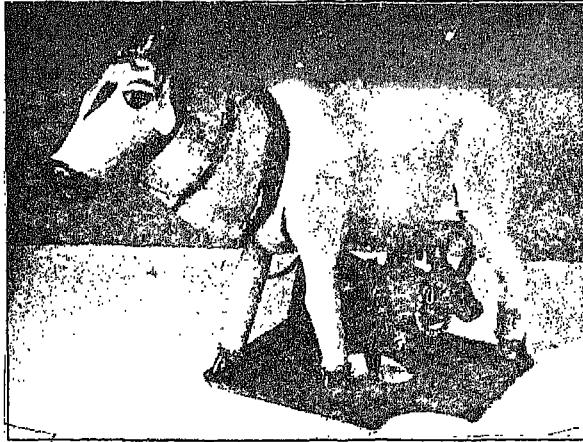


Fig. 2



Fig. 3

Samples from Sumbalpur district have complicated designs (Fig.-1). In the sample from Bolangir district (Fig.-2) Cow and the Calf made out of tin, stand on a base. The Cow has a hook on the top of the body to enable it to hung. A string of colourful beads is tied connecting one horn to another. A spring is attached from the head of the neck, which is hollow, so the head nods. The calf is brown in colour and stands under the cow with nodding head, string around the neck and a small bell on it.

A white bull carved out of wood in a typical Odissi style and fixed on a wood base. Painted elaborately with red, yellow, black and green paints. (see Fig.-3).

Dog

Material used:

Clay, cowdung, china clay, wood, lacquer and Paint.

Place:

Barabati in district Balasore, Baxibari in district Keonjhar, Boudh Khandmal in district Phulbani, Cuttack in district Cuttack, Odagan in district Puri and Dharmagarh in district Bolangir.

A dog modelled out of clay (Fig.-1) is a baked item after applying a coat of red lacquer for the glaze.

Cats

Material used:

Clay, china clay, papier mache.

Place:

Boudhkhandmal in district Phulbani and Khandpada in district Puri.

These are mostly made up of clay or china clay or papier mache. Clay products are baked in a kiln. (Fig.-4)

Horses**Material used:**

Clay, bee wax, brass, aluminium, bronze, cowdung, wood, paper, beads and wire.

Place:

Sadeiverani in district Dhenkanal, Kullana, Barbazar, Kumbharasahi Baripada in district Mayurbhanj, Raigar, Jaypore, Koraput in district Koraput, Barapati in district Balasore, Binika in district Bolangir, Puri in district Puri, Cuttack, Baliyatra in district Cuttack, Sambalpur in district Sambalpur, Kalahandi in district Kalahandi, Biramitrapur in district sundargarh, Keonjhar in district Keonjhar.

Horses made out of wood and painted elaborately in odissi style are seen in figure-3. Horses made out of dhokra metal is shown in figure-4. A large horse, about a feet high is made out of cowdung and clay. It is covered with cloth and painted colourfully for glazed finish (Fig.-5).

Elephants**Material used:**

Clay, cowdung, cloth, brass, bee wax, wood, papier mache, paddyseeds and colours.

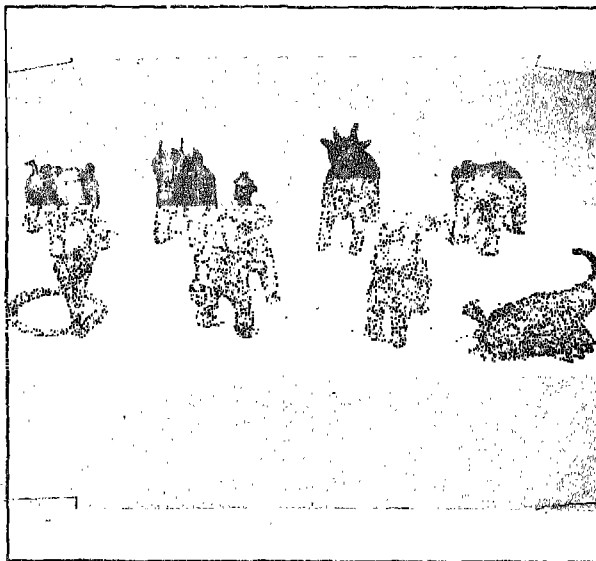


Fig. 4



Fig. 5

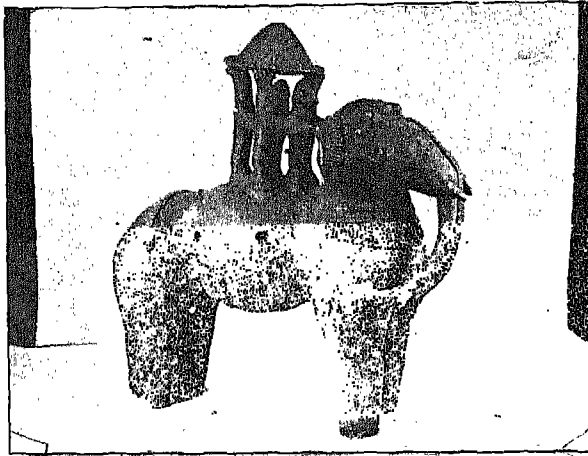


Fig. 6

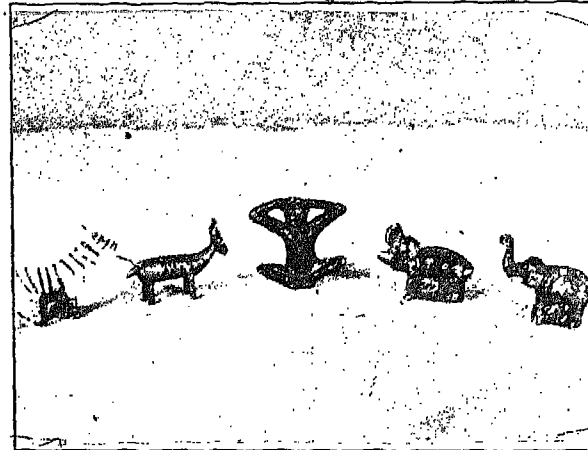


Fig. 7



Fig. 8

Place:

Kumbharsahi Baripada, Kutlira, Barabazar, Baripada in district Mayurbhanj, Itamati, Banapur in district Puri, Sadeiveram in district Dhenkanal, Birmitrapur in district Sundergarh, Junagarh in district Kalahandi, Cuttack in district Cuttack, Baxibargaon, Keonjhar in district Keonjhar, Aska in district Ganjam and Barapali, Baragarh in Sambalpur.

Elephants are made out of clay and then baked (Fig.-1). Elephants made out of wood (Fig.-3), one small and onther big in size, are fixed on a wooden base and painted in folk style. These are also made of dhokra metal, a unique tribal casting in which figure made out of clay is superimposed with a design in rolled wax. Molten metal is then poured between the wax and the clay cast, which covers it. Then the cast is fired in a small kiln (Fig.-4). One feet high elephant modelled out of clay and backed. An umbrells is fixed on the top of it and under which a bride and bride groom stand. (Fig.-6).

Tigers**Material used:**

Wood, clay, papier mache, brass, bee wax, wire and colour.

Place:

Cuttack in district Cuttack, Baxibari in district Keonjhar, Sadelverani, Angul in district

Dhenkanal, Itamati and Raghurajpur in district Puri and Dharmagarh in district Kalahandi.

Modelled out of clay and left unpainted, tiger is seen in (Fig.-1), Tiger Brightly coloured and carved out of wood is seen in (Fig.-3).

A tiger made out of Dhokra metal i.e. tribal casting is figured in Fig.-4. A tiger made out of papier mache, cloth and glue is very popular toy of puri. It is available in plenty specially at festivals. Its head has a clay knob at the back and is fixed with wire loop in side the neck and sways when touched. (Fig.-8).

Deers

Material used:

Cowdung, paper, cloth, clay, papier mache, brass, wood and paints.

Place:

Jeypore in district Koraput, Bolangir in district Bolangir, Bhawanipatna in district Kalahandi, Belguntha, Purusotampur in district Ganjam, Sadelverani in district Dhenkanal, Cuttack in district cuttack, Puri in district Puri and Laxamannath in district Balasore.

Deer Modelled out of wood and painted in natural colours is depicted in Fig.-3. A miniature deer modelled out of brass and copper is shown in figure-7. Like wise, these are made out of clay, cowdung and dhokra in other parts of the state.

Camel

Material used:

Tin, Paint, horn and wire.

Place:

Binika in district Bolangir and Rampur in district Kalahandi.

A camel modelled out of tin, one feet in hight, is painted with colours. The head is attached to the hollow neck with a spring which makes the head sawy. A wire hook is attached to the top of the body. (fig-9). Camel made out of horn was available from Rampur in district Kalahandi.

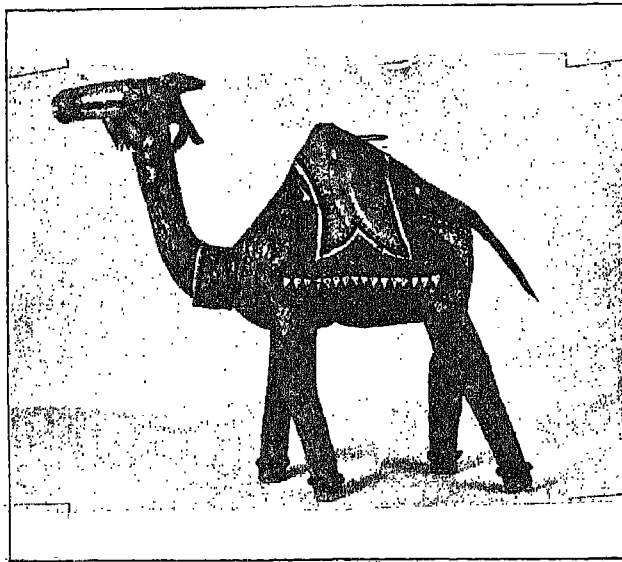


Fig. 9

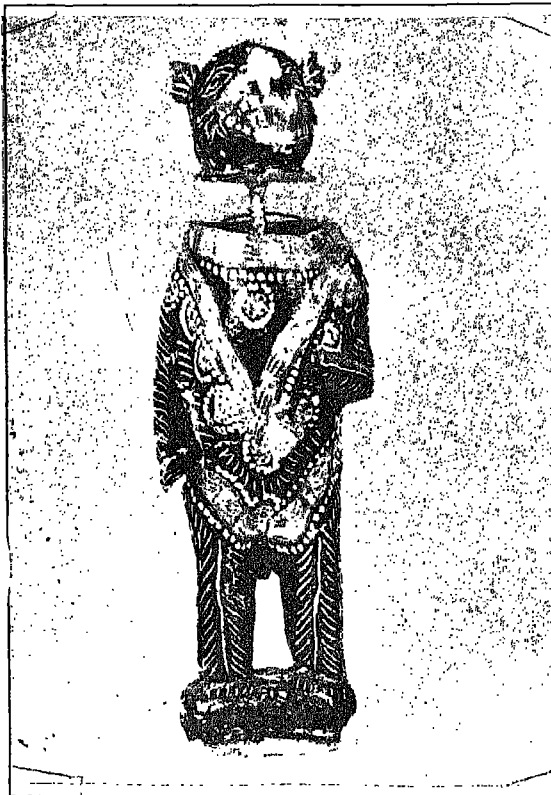


Fig. 10

Monkey**Material used:**

Clay, wood, lacquer and colour.

Place:

Baripada in district Mayurbhanj and Cuttack.

Monkey in a sitting position on the two hindlegs is shown in figure-7. The arms of the monkey are on top of the head. Modelled out of clay and painted with black lacquer, it is of miniature size.

Lion**Material used:**

Wood, nails and colour.

Place:

Tusura in district Bolangir, Shakhigopal, Raghurajpur in district Puri, Purusotampur in district Ganjam and Baragarh in district Sambalpur.

Carved out of wood and painted, these lions sit on a wooden base (Fig.-3). These are traditional carvings commonly found on temple gateways.

Zebra**Material used:**

Clay, lacquer and colour.

Place:

Bripada in district Mayurbhanj.

Modelled out of clay and coloured, the zebra stands on a green base, is of miniature size (Fig.-7).

Rats**Material used:**

Clay, cowdung and colour.

Place:

Koraput

These are made out of clay, clay and cowdung and painted black. Found in Koraput district.

Bear**Material used:**

Papier mache, wire and colour.

Place:

Raghurajpur in district Puri.

Made out of papier mache, the bear is standing with nodding head. It is a common festival toy of puri. (Fig.-10).

Educational Potential and guidelines for their use:

The large number of animal toys collected only goes to prove how close to nature lives a child in Orissa. Vividly painted animal toys would brighten any class room. This will promote development of concepts e.g. size, colour, shape, numbers, environmental studies and language skills. All the toys can be put together and

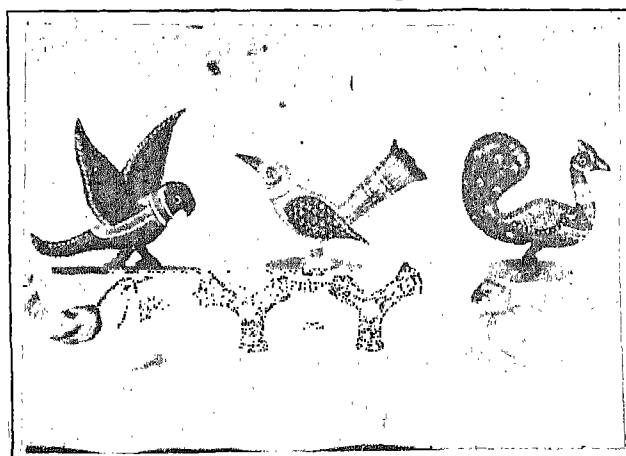


Fig. 11

the child can be taught to separate the big animals from the small. Rabbit is small and an elephant is big. Colours of different animal can be taught and child can classify animals according to colours. Addition and subtraction can also be taught. Children can be made aware about the habit and habitat of different animals. Differences between wild and domestic animals and carnivorous and non carnivorous animals could be

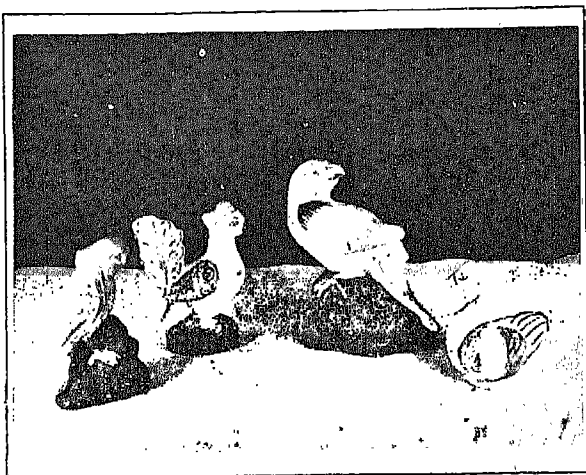


Fig. 12



Fig. 13

studied. Stories and songs can be told and taught about animals. Children can be taught to dramatize different animals—the way they walk and produce sounds.

Teacher can develop skills, using clay, papier mache, in making various animal toys for educational purpose i.e. for seriation, classification, concept of colour, shape and size.

BIRDS

Parrot

Material used:

Wood, clay, bamboo, shells, lacquer, paint.

Place:

Purusotampur in district Ganjam, Balmela in district Koraput, Bauramda in district Cuttack, Boudkhandmal in district Phulbani, Tasura sonapur in district Bolangir, Nayagarh in district Puri and Burabati in district Balasore.

Carved out of wood, with wings held up, this parrot is painted in typical odissi style of Puri (Fig.-11). Made out of shells, the parrot at the right hand bottom in Fig-11 has glossy finish and elaborate painting. Made out of clay and painted in light green and red, this parrot is seated on a rock (Fig.-12).

Cock and hen

Material used:

Clay, wood, horn, cowdung, metal casting (dhokra), straw, lacquer and paint.

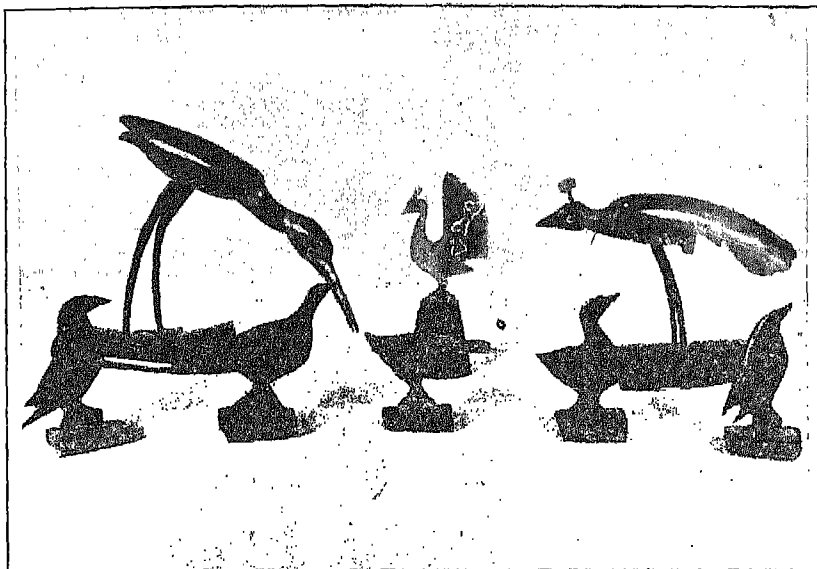


Fig. 14

Place:

Jaypore in district Koraput, Tangiri in district Dhenkanal, Barabati, Iswarpur in district Balasore, Baxibarigaon in district Keonjhar, Rampur in district Kalahandi and Balyatra in district Cuttack.

Cock (two pieces) made of clay, backed and painted are shown in Fig-11. A cock made of clay with glossy lacquer finish in black, yellow and red colour is seen in Fig-12. From Balyatra in district Cuttack comes this beautiful one foot high model of hen made from straw, clay and cowdung. This is painted in beautiful designs in brown, yellow, white and green (Fig-13).

Peacock**Material used:**

Wood, horn, shells and paint.

Place:

Cuttack, Paralakhemundi in district Ganjam, Rampur in district Kalahandi, Nayagarh in district Puri and Nilagiri in district Balasore.

Carved in wood and painted in green is a peacock, fixed in a red painted base. Painting is done in the oddisi style of Puri (Fig.-11). Carved out of horn, a peahen and a peacock are seen placed on high based (Fig.-14).

Swan**Material used:**

Horn, Plaster of paris, shells, china clay and paints.

Place:

Rairangpur in district Mayurbhanj, Baharmapur in district Ganjam, Bolangir in district Bolangir and Rampur in district Kalahandi.

Swan modelled out of plaster of paris, sundried, painted in yellow, red, and light blue is shown in Fig.-12.

Simple and modernistic carved out of horn, a set of two small swans is shown in Fig.-14.

Crane

Material used:

Clay, bamboo stics, horn and colour.

Place:

Baripada in district Mayurbhanj and Paralakhemundi in district Ganjam.

Carved out of horn is a crane bending low with open beak (Fig.-14).

Eagle

Material used:

Clay, paper, cloth, wood and paint.

Place:

Boudh Khandamal in district Phulbani, Rairangpur in district Mayurbhanj and Cuttack in district cuttack.

Seated on a rock is a beautifully modelled clay eagle, which is painted white. Shown at extreme left in Fig.-12.

Crow

Material used:

Clay, horn and lacquer.

Place:

Barabati in district Balasore and Rampur in district Kalahandi.

A miniature crow, simply carved out of horn is shown extreme left in Fig.-14.

Duck

Material used:

Horn and colour.

Place:

Rampur in district Kalahandi.

A duck carved out of horn is shown in Fig.-14.

Other birds

Material used:

Bamboo, clay, wood, cloth, cardboard, shells and cotton.

Place:

Banpur in district Puri, Baxibari in district Keonjhar, Bauramba in district Cuttack, Barabati in district Balasore, Bhubneshwaryatra in Bhubneshwar, Balyatra in Cuttack, Puri town in district Puri and Deogarh in district sambalpur.

A bird carved out of wood and colourfully decorated in odissi style of painting shown at the centre in Fig.-11. Similarly, a bird cut-out and made of Shells is shown at left side corner in Fig.-11, which is painted in vivid colours with gloss finish.

One to five birds on separate platforms, held by a thread which hangs under the platform with a clay ball are shown. As the ball moves, the birds pick into the centre of the platform (Fig.-15).

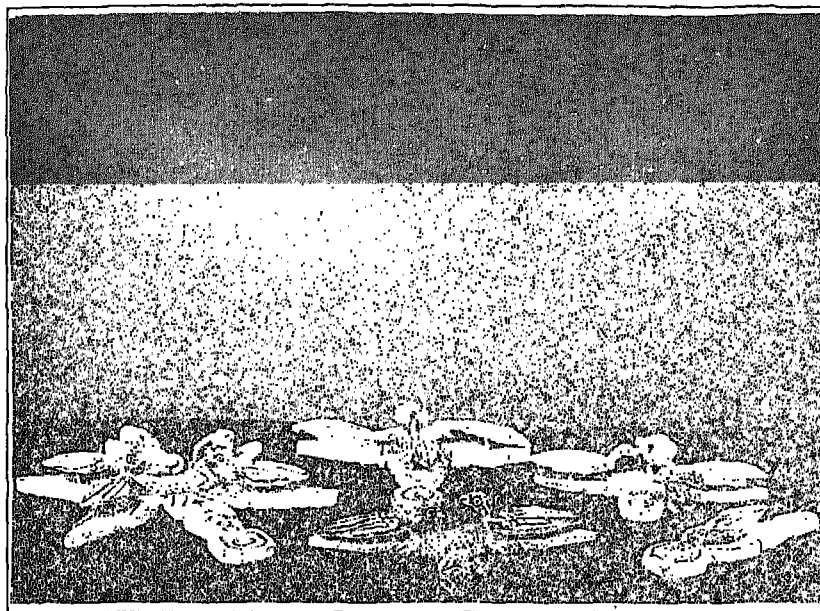


Fig. 15

Educational Potential and Guideliness for their use

Figures of birds are colourful and interesting to have in a class room. They are useful for developing language skills, concepts of colour and size, study of environment as well as encouraging a child's interest in ornithology. They can be used for play as well as teaching aids.

During play and conversation the teacher can point out large and small birds, differences in size and colour, relation between beaks and food habits, neat and untidy nests, small and big nests, size and colour of birds eggs. Activities can include collecting eggs, feathers, nests, pictures of birds, pasting, drawing, crayon work, painting and clay modelling. Outings can be planned for bird watching and binoculars can be introduced if available, to watch birds from a distance without disturbing them. A bird bath can be built by children and grain scattered to encourage birds to come to the school ground. Simple dramatic activities highlighting sounds and movements of birds, action songs about birds can be sung and stories told. These can be made up on the spot by the teacher as well as the children. Riddles can be asked describing different birds.

Fish, Reptiles and Insects

Fish

Material used:

Clay, wood, metal, horn, shells, brass, colour, synthetic colour, wire and glue.

Place:

Baxibarigaon in district Keonjhar, Barbazar, Baripada in district Mayurbhanj, Cuttack in district cuttack, Tangiri in district Dhenkanal, Rampur in district Kalahandi, Puri in district Puri and Belaguntha in district Ganjam.

Carved out of wood, painted in traditional oddisi style and fixed on green wooden base, there are two different colour fish-white and brown, representing two different type of fish. (Fig.-16).

At bottom right hand side (Fig.-16) shown is a fish made out of shells. Shells are cut out into shapes and fixed together like a fish and painted with glossy colours. Made out of clay are shown two big size fish with slit on the top to be used as coin box. One is baked and another is sundried (Fig.-16).

A fish made of primitive metal casting by the tribals of orissa is shown in Fig.-16 (extreme right).

Famous belguntha flexible fish fixed in an intriate way with many small brass pieces and rings is shown at mid bottom of Fig.-16.

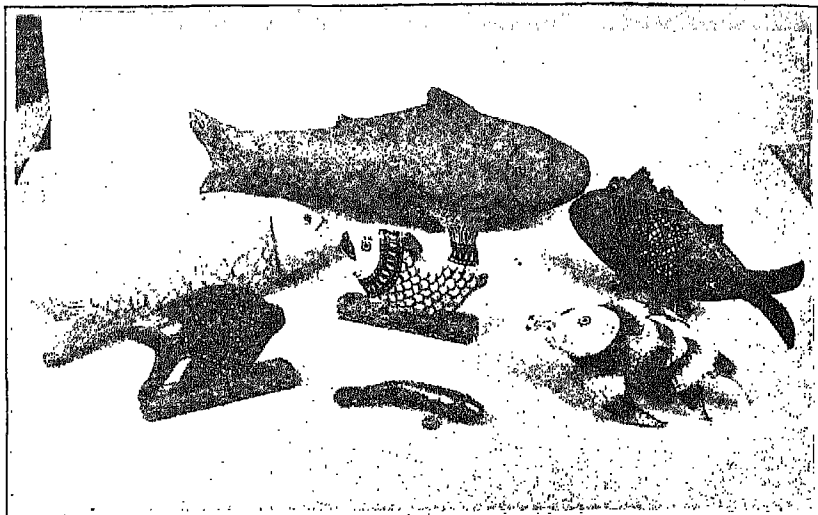


Fig. 16

Snakes**Material used:**

Clay, metal casting and colour.

Place:

Cuttack and Tangiri in district Dhenkanal.

Snake made out of metal casting is shown in Fig.-4 (extreme left).

Scorpion**Material used:**

Metal casting

Place:

Kuliria in district Mayurbhanj.

A scorpion made out of metal casting is shown in Fig.-4 (extreme right).

Frog**Material used:**

Clay and colour.

Place:

Cuttack, Banpur in district Puri.

These are made out of clay and painted with yellow, black and red colours.

Butterfly**Material used:**

Wood and Colour.

Place:

Sundargarh in district Sundergarh and Baripada in district Mayurbhanj.

These are carved out of wood and painted.

Tortoise**Material used:**

Metal casting.

Place:

Belguntha in district Ganjam.

Alligator**Material used:**

Wood, colour.

Place:

Badamba in district Cuttack and Bamapur in district Puri.

Lizzard**Material used:**

Wood and colour.

Place:

Sundergarh.

Educational Potential and Guidelines for their use:

Orissa is intereseected by various rivers and has a long coastal area washed by the sea, providing plentiful fish and other forms of life which thrive in such climate, like varieties of reptiles and insects. Samples of these have been collected from all the districts. These samples of fish, snake, frog, butterfly, tortoise, alligator, lizard, and scorpions can be kept in the class room. They help in the development of concept formation like shape, size, colour, number, study of environment and language formation.

Children can be told about the different kinds of river and sea life, shapes and sizes of fishes. They can sort out some of these objects according to their shape, size and colour. The concept of sinking and floating, sense of touch and distinction between reptiles and insects and measuring the length can also be taught.

The teacher can cut fish out of cardboard, stick coloured paper, write numbers

on each and attach a paper clip. A fishing rod can be made by tying a string with a magnet attached to it. The children can play a fishing number game with this. Outings to the aquarium, crocodile farm, and nature walk can be planned for children. Seriation cards of the life history of frog and butterfly can be prepared by the teacher for the children to put in serial order. Children can draw, colour, paint and stick pictures of reptiles, fish and insects. Hand work activity like modelling these with clay can be conducted.

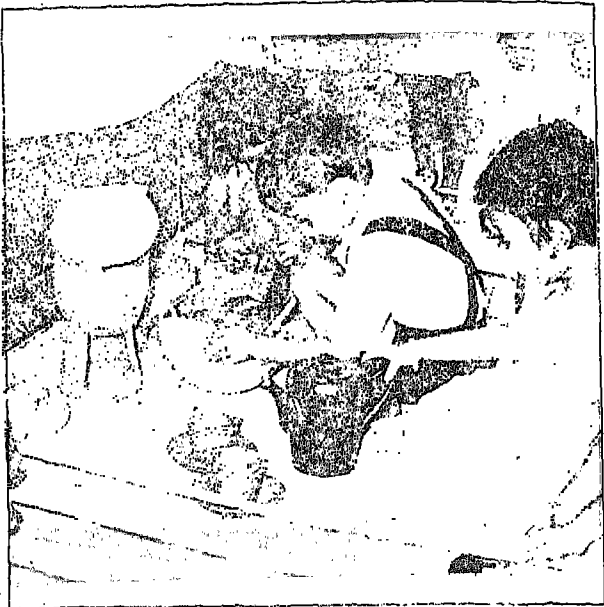


Fig. 17

House-Play Materials

House-play is an interesting activity for young children. They remain busy doing various activities-mostly imitating what they have seen adults do, provided if they are given variety of materials for house play. (see Fig.-17) For house-play various items needed and available are figured out as below.

House

Material used:

Clay, wire, Wood and colour.

Place:

Phulpuko, Barang in district Cuttack and Digi in district Balasore.

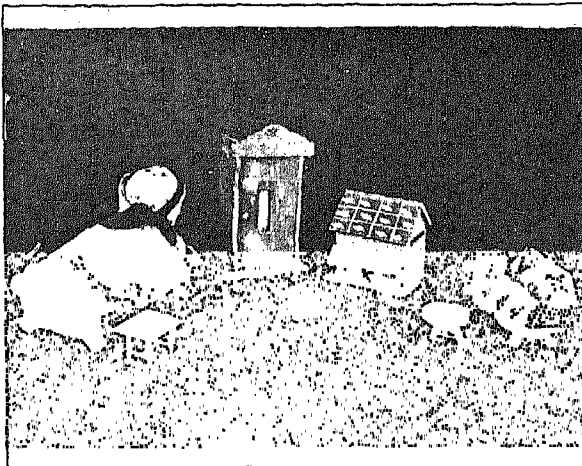


Fig. 18

A hut made of ply wood with a dog seated in front of it is shown in Fig -18. The hut is coloured with different colours.

Bed sofa

Material used:

Cotton, cloth, beads and threads.

Place:

Dandkaranya, Umerkote in district Koraput.

Beads are threaded into the shape of sofa having cotton and cloth base. (Fig.-18).

Cots**Material used:**

Wood nails and colour.

Place:

Nilagiri in district Balasore.

Made from small pieces of wood and put together with nails these cots are very popular in house-play. One such cot is shown painted in different colours in Fig.-18. A doll is kept lying on the cot.

Table set**Material used:**

Bamboo and colour.

Place:

Manapur in district Puri.

A table set is shown in Fig.-18. One is round and another rectangular. These are made of bamboo and kept unpainted.

Almirah**Material used:**

Wood, glass, colour and drawing pin.

Place:

Balasore in district Balasore.

A simple almirah with a glass door and with a drawing pin for the handle is shown in Fig.-18. The almirah is made of Wood and coloured.

Chakla Belana**Material used:**

Wood.

Place:

Digi in district Balasore.

Made for two small pieces of Wood, one circular and the other a long stick cut and carved into a balance stick (Fig.-19).

Oven**Material used:**

Clay and colour.

Place:

Bhetkhal, Boudhkhhandmal in district Phulbani.

Chulhas made of clay and sundried are shown in Fig-19. Few are baked and coloured.

Utensils**Material used:**

Clay, aluminium and colour.



Fig. 19

Place:

Koraput, Atopur in district Keonjhar and Ganjam.

Plates made out of clay and baked are used as lids for pots or 'dekchis'. Baked clay spoon are also shown. Tribal children use these spoon for house-play alongwith plates and 'Karhais'. Likewise, pots modelled out of clay and baked are used for storage of water and are quite popular among tribal children (Fig.-19). Utensils moulded and beaten out of aluminium ingots are very popular with children for doll house play in schools (Fig.-20).

Money Purse and Necklace**Material used:**

Seeds, jute and colours.

Place:

Meraigaon in district Keonjhar.

Handbags are woven out of jute is useful item in house-play. Necklaces are made of seeds which also make an useful item in house-play. These seeds are called Kadamba seeds. Money bag is also made by threading the Kadamba seeds.

Mat**Material used:**

Jute.

Place:

MeralGaon in district Keonjhar.

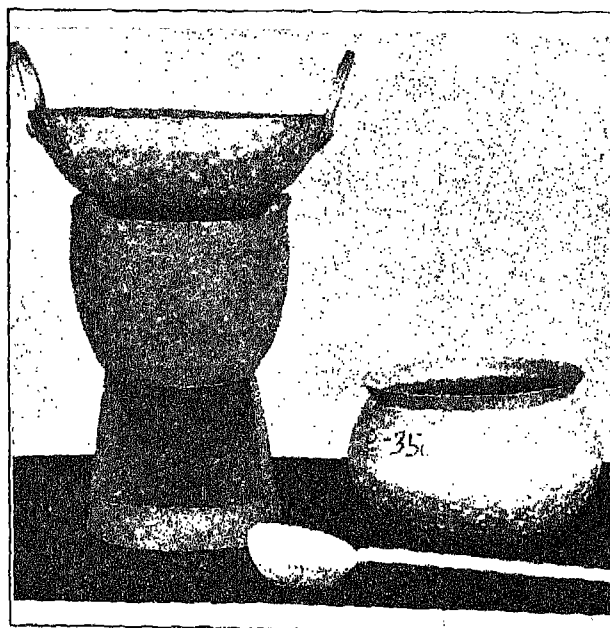


Fig. 20

Mats are made out of Jute of different colours. Children sit on it during any activity. This is found in almost all districts and villages of Orissa.

Sword

Material used:

Wood, silverpaper and paper.

Place:

Barbazar in district Mayurbhanj.

A wooden sword having a paper sheath instead of a leather one is found in district Mayurbhanj. The sharpened surface of the sword is pasted with silver paper.

Cups, Saucers, Tea pot and Jug

Material used:

Clay and colour.

Place:

Bhetkhol, Boudhkhendmal in district Phulbani.

Cups and saucers are made out of clay. These are coloured and well finished. A very modern looking tea pot which is made of clay, coloured black and glazed lightly is shown in (Fig.-21). Similarly Jug modelled out of clay, painted and glazed is also shown in Fig.-21.



Fig. 21

Agarbatti Stand and lamps (diyas)

Material used:

Clay, sand stone and colour.

Place:

Matvarandi, Umerkote in district Koraput, Bhetkhol in district Phulbani.

Agarbatti stands made out of clay with tiny holes for fitting the incense sticks are made in Bhetkhol area of district Phulbani. But these are made out of sand stone in Umerkote in district Koraput. Red coloured lamps (diyas) are made out of clay and baked found in Umerkote (Koraput district).

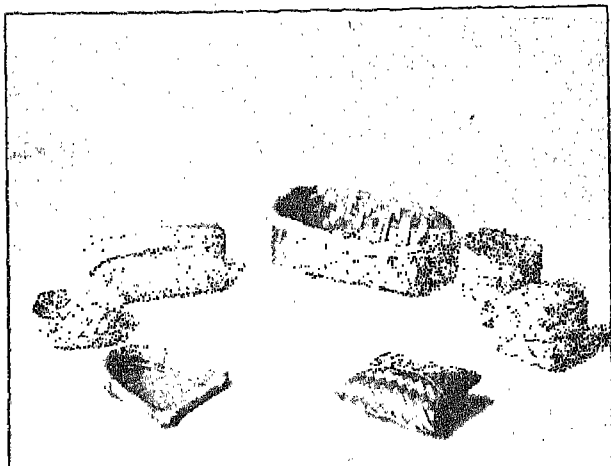


Fig. 22.

Place:

Sundergarh, Mayurbhanj, Belisahi, Malkangiri in district Koraput, Puri and district Ganjam.

Various house-hold items useful for house-play and made out of palm leaves or bamboo are shown in Fig.-22 & 23.

A miniature size 'Kula' (for sorting grains) is made of bamboo. It is used in sand play or dolls house play (Fig.-22 at left side bottom).

Similarly a bigger size 'Kula' (grain sorter) is shown in Fig.-23.

Small baskets made out of bamboo, with cover are finely woven.

A hat woven out of strips of palm leaves with diamond shaped design all around can be used by children on nature walk and outing to protect them from sun. (Fig.-23).

A basket with handle made from coconut tree sticks can be used for collecting various material/articles during nature walk and can also be used in house-play

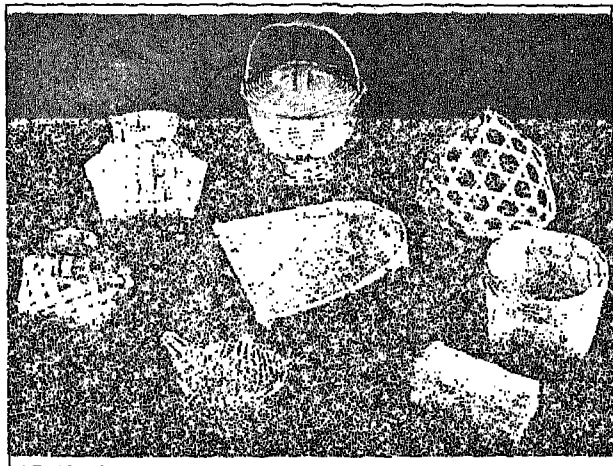


Fig. 23.

Grinder**Material used:**

Clay and paints.

Place:

Sanavarandi in district Koraput.

Grinder modelled out of clay with painted designs has a handle to hold and rotate. This is a popular item for child play.

Baskets and Vanity bags**Material used:**

Bamboo, palm leaf, coconut tree sticks and golden grass.

activities. (Fig.-23)

An open basket made out of golden grass can be used for sorting things in house-play. (Fig.-23)

Educational Potential and Guidelines for their use:

A corner set aside for house play is a very essential part of every pre-primary school. House play or role play is essential for emotional development and while

enacting parental or sibling roles children can solve many of the problems which exist for them. It helps to promote social development and language skills and social studies.

The teacher can let the children play in the house corner where the children are not conscious of adult presence and tend to mix openly and unselfconsciously with the peer group. There is a free flow of conversation and the child enhances his vocabulary. The teacher may give them different roles to play on different days and the child enacts and lives the roles of the characters he represents. Houseplay can be played with as many as 5-6 children - a fairly large group. Here the child learns to share, to take turns in playing, to wait for his turn and plays different roles. This helps in his social development. The teacher can utilise this play to name the different rooms in a house and their uses as well.

Activities can include nature walk from which they can collect articles like flowers, leaves, and stones for the house. They can draw and colour, cut and paste pictures suitable for the house. Some of the children can cook simple things e.g. potatoes or watch the teacher boil and fry them. This gives confidence and they learn to socialise better. When extended to include people outside the home, house play can be a means of learning social studies, for example, introducing the postman, dhobi, sweeper as well as their roles and duties.

Dolls

Wooden Dolls

Material used:

Wood and colour.

Place:

Tusura and Binika in district Bolangir, Cogua and Deogarh in district Sambalpur and in districts Kalahandi, Ganjam and Sundargarh.

Wood carved into the figure of a mother holding her child, coloured brightly in yellow, black, green, magenta and blue (at centre of figure-24). A similar doll is appearing at right hand end of the Fig.-24.

A male doll carved out of Paladhua wood, is painted with red, green, yellow and black colours (Fig.-24 - second from left).

A female doll (extreme left of Fig.-24) and an other male doll are shown in Fig.-24.

There is a doll depicting a tribal man from kalahandi playing a drum is shown at the centre of Fig.-25. A modern doll, made of wood is shown at left hand extreme of Fig.-25. A similar female doll is also shown at second from right of Fig.-25. A police man, brightly coloured, in dresses belonging to an earlier period which do not resemble to modern police man's cloth, is shown in Fig.-25.

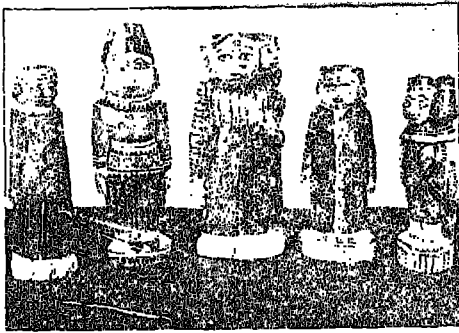


Fig. 24

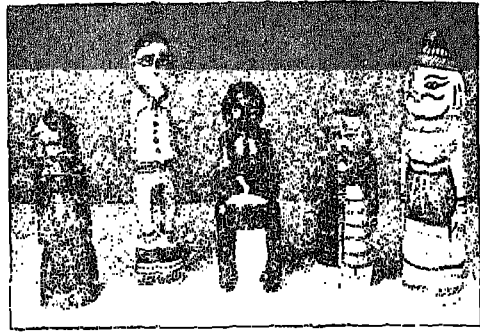


Fig. 25



Fig. 26

Clay dolls:**Material used:**

Clay, cloth, paper, cowdung and colours.

Place:

Harchandi, polasahi in district Puri, Rairangpur, Barabazar, Baripada in district Mayurbhanj, Gogua in district Sambalpur and Boudhkhandmal in district Phulbani.

Modelled into dolls from clay, cowdung and paper these dolls are painted with blue, pink, brown and white colours (Fig.-26 and 27).

Modelled out of clay a eskimo boy is shown at extreme right, in Fig.-26. A woman with a child in her arms is shown next to eskimo. Next modelled out is a boy with a red cap, a chain round the neck and bearing half pant. A man and a woman are seen dancing. There are more clay made dolls on the left hand side as shown in figure-26. Similarly, many dolls made out of clay are shown in figure-27. These are all female dolls. Two of them are carrying things on their head. Two women next to them are squatting, one grinding masala and other is cooking.

Modelled from clay, cowdung and paper, these dolls have their faces and limbs painted distinctly. They have coloured paper at the back of their head giving them fancy look. Fig.-28.

Dolls modelled out of clay, dried, lacquered in yellow and red colours primarily and dried again in a simple kiln are available in plenty at the time of Dashera festival. Fig.-29 & 30.

Educational Potential and Guidelines for their use:

All children like doll play. Traditionally it is a role confined to girls, but if left to themselves boys and girls take equal interest. It promotes language, and social development, number play and concept formation.

The teacher can use dolls as teaching aids to name the different parts of the body, personal hygiene like brushing teeth, combing hair and cleaning nails can also be taught through them. Few can particularly be used for counting and gradation. Learning of the different colours can be encouraged. The dolls can also be used for story telling. While playing, children learn about houses, the concept of a clean and dirty house.

Since dolls form an essential part of doll house-play, activities can be included of role playing i.e. looking after babies, bathing, changing, preparing dresses, feeding and other housework. Roles of parents will be enacted as well as of other helpers like the servants, dhobi, gardener, cook etc. Children can make dolls out of clay or plastercine, can cut out paper dolls and their dresses and so on.

Fruits and Vegetables

Material used:

Clay, solopaper and synthetic colour.



Fig. 27



Fig. 28

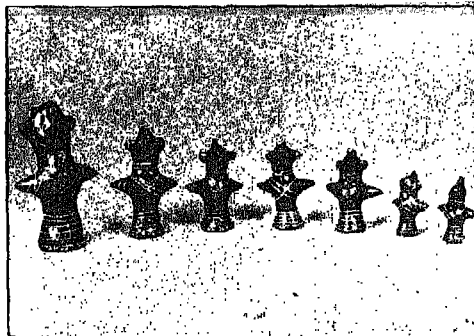


Fig. 29

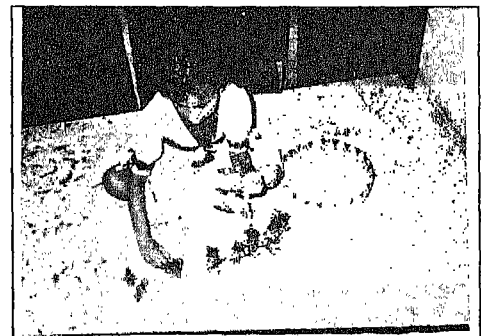


Fig. 30



Fig. 31

Place:

Baripada in district Mayurbhanj, shakhi Gopal and Dhakuta sahi in district Puri, Guaga in district Sambalpur Jeypore and Umerkote in district Koraput.

Mango, Guava, Cashew, Banana, Maize, Apple, Tamarind, Chilli, Lady Finger, Brinjal, Gourd, Bitter Gourd, Betal Leaf, Shell and Cucumber are some of the fruits and vegetable models which are found in different parts of the state. Some of the items are shown in figure-31.

Educational Potential and Guidelines for their use:

A child is in contact with fruits and vegetables in both forms, raw and cooked, everyday. Kept in school these would sharpen his awareness of his immediate environment. It would help in sensory training, language and number play.

The teacher can use these articles as teaching aids to develop the child's sense of touch, smell and taste. The child can also learn to differentiate between colours, sizes and shapes. For instances a custard apple is rough and a mango is smooth, chilli is spicy and guava is sweet; distinction can be made between fruits and vegetables. Vegetables are usually cooked and fruits are eaten raw. The teacher can tell the children the different geographical background of fruits e.g. Custard apples grow in plenty in Orissa but none grow in Punjab. Actual fruit seeds can also be collected and differences noted like those of mango and custard apple. The children be told about the different types of trees for example, mangoes grow on trees, brinjals grow on plants and cucumbers grow on creepers. The teacher

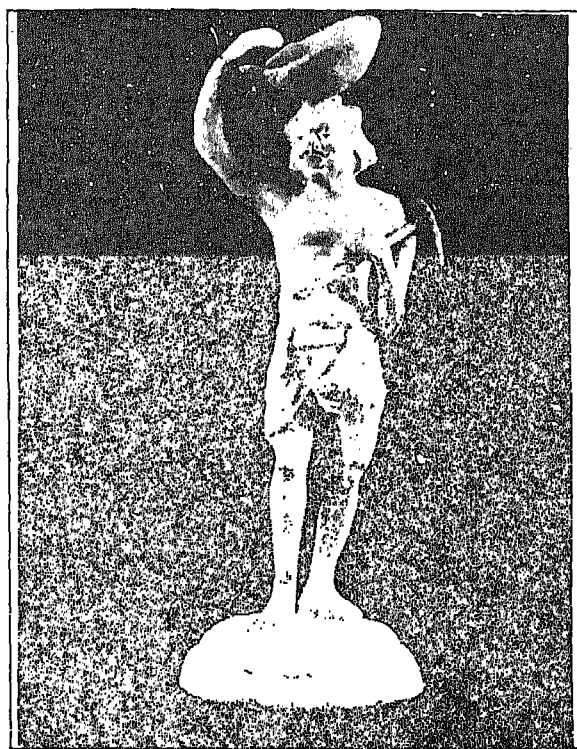


Fig. 33

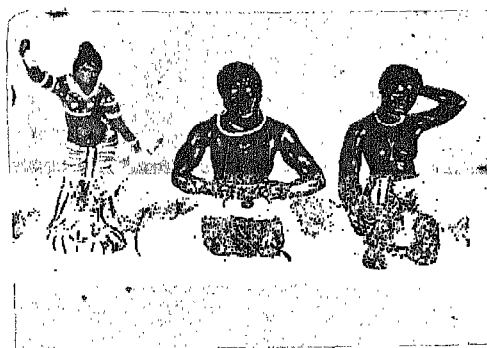


Fig. 32



Fig. 34

can do a project on germination and let the children plant certain seeds which take a short time to grow. The difference of root vegetables and vegetables on the plants can be pointed out and also raw, ripen and rotten fruits and vegetables.

A number of creative activities can be conducted with children e.g. they can soak tamarind and custard apple seeds and string them. Activities can also include drawing and colouring of fruits and vegetables. They can cut pictures and paste and play memory games, discrimination games and seriation games with the fruits and vegetables or with pictures of fruits and vegetables. A variety of cognitive and language activities can also be conducted.

The children can cut the vegetables and thus the use of knife can be demonstrated. All the fruits can be cut and eaten

and the children can have a party. They can also make clay models of the different fruits and vegetables shown to them.

Toys for Environment Study

Tribal People

Material used:

Clay and water colours, feathers, thread and glossy paint.

Place:

Boudhkhhandmal in district Phulbani and Baragarh in district sambalpur. Modelled out of clay are three tribal people, two women and a man. A tribal woman is shown with a dagger on one hand and a dead swan on the other hand (fig-32). Painted with glossy colours and modelled out of clay a tribal couple in sitting position, dressed with feather skirts, is shown in Fig.-32. The man is playing drum and woman is dancing.

Farmer**Material used:**

Clay and powder colour.

Place:

Barabazar, Baripada in district Mayurbhanj.

A typical oriya farmer, modelled out of clay and coloured with white powder colour is shown in Fig.-33. The farmer is going to work with a spade on his shoulder and a basket on his head.

Old Purohit**Material used:**

Clay, wire, spring, cotton and colour.

Place:

Binika in district Bolangir.

Modelled out of clay and painted with glossy colours, is an old 'Purohit' with a shaking head. A spring has been used to serve as a neck (Fig.-34).

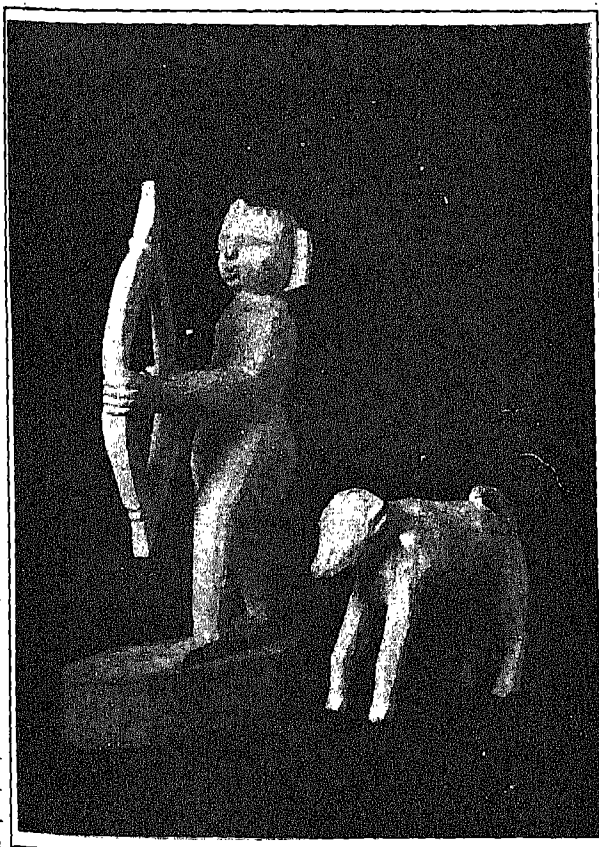


Fig. 35

Some clay models of people around us are appearing in Fig.-26 and 27. For example -a dancing pair, woman carrying water, woman squatting and grinding masala on a stone. Like wise models of Boatman, drummer, policeman, musician, hermit are also found in addition to above figures.

Hunter**Material used:**

Wood and colour.

Place:

Dharmagarh in district Kalahandi, Binika in district Bolangir, Baragarh in district Ganjam, Boudhkhhandmal in district Phulbani.

A hunter with a bow, carved out of wood, is shown in Fig.-35. A dog carved out of wood is also shown near the hunter. Similarly models of horse rider, elephant riders are found in district Kalahandi, Bolangir and Sambalpur. Horse riders made out of 'dhokra' metal are found in Boudhkhhandmal in Phulbani district.

Building**Material used:**

Bamboo and fevicol.

Place:

Rankanathpatna, Banpur in district Puri.

Varieties of houses, some multistoried, made out of thin sheets of bamboo; cut in even size and stuck together with adhesive are shown in Fig.-36.

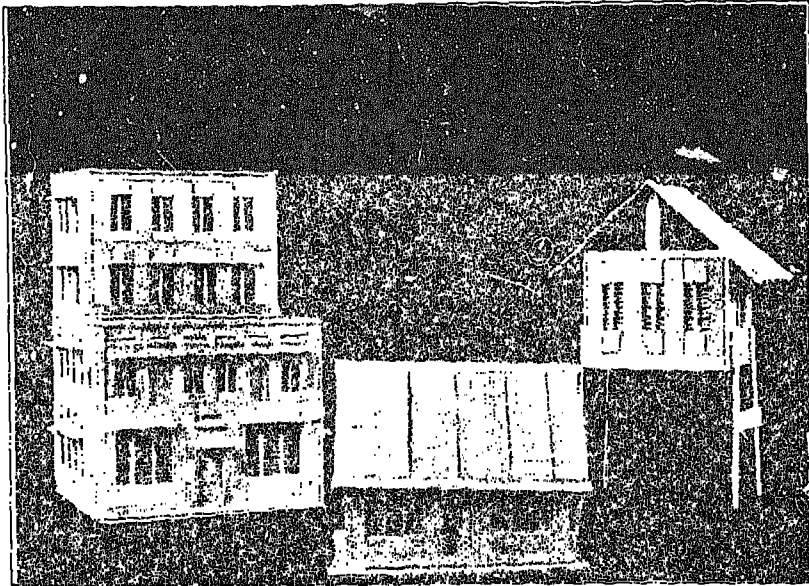


Fig. 36

Educational Potential and Guidelines for their use:

These toys have been separated because each one of them is depicted playing a specific role. Since they represent people one meets in every day life they are excellent aids for developing language skills and acquainting the child with his own environment. Conversation generated by using the figures as models could be directed towards learning about each one's where they live and how they help the other members of society. Stories and rhymes would add greater interest. Each role could be dramatised and if imaginatively planned can aid in number work e.g. counting colours of clothes, sizes large and small, rough and smooth and so on. While talking and dramatising children pick up new words and use them. Some of the wooden figures like elephant and horse-riders can be used by the children during free play.

Transport Toys**Palanquins****Material used:**

Wood, tin, glazed paper, clay and colour.

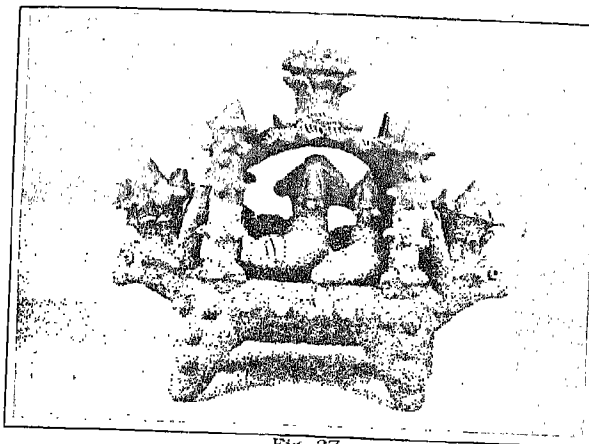


Fig. 37

Place:

Digi in district Balasore, Baripada in district Mayurbhanj, Rathyatra in district Puri, and Sambalpur in district Sambalpur.

Palanquins are still in use in the villages in Orissa. These are available in large numbers and used as toys in almost every district. These are made out of clay or wood. In Fig. -37 a clay made palanquin (Palaki) is shown. A tribal couple is seated inside the palanquin.

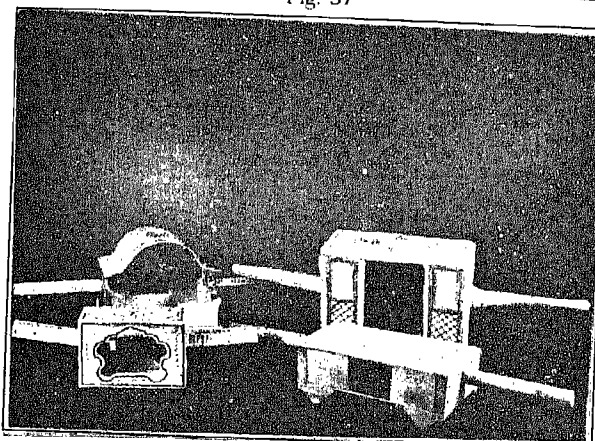


Fig. 38

Wooden palanquins are shown in Fig.-38. These are of different size and painted beautifully.

Cart

Material used:

Wood, nails and colour.

Place:

Ganjam in district Ganjam. A simple cart made out of wood is shown in Fig.-39. Children pull the cart with the help of a rope.

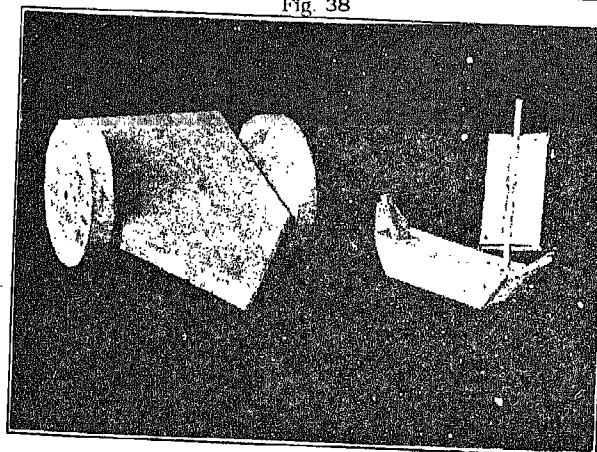


Fig. 39

Boat

Material used:

Bamboo, clay, shells and paint.

Place:

Banpur, and Puri in district Puri, Koraput and Bhubneshwar.

Made out of bamboo sticks is a boat as shown in Fig.-39. Sticks are stuck together to make a boat and sails. Like wise, attractive boats made out of clay or shells joined together and cut to the shape of a boat are also found in district Puri.

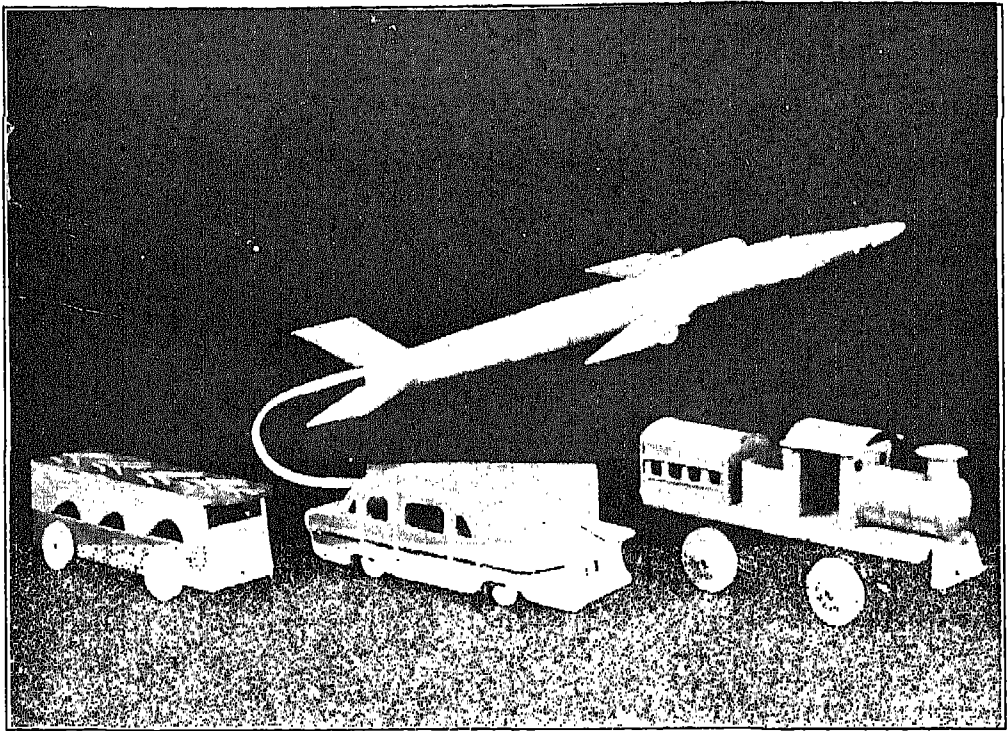


Fig. 40

Engine**Material used:**

Tin, wood, nails and colours.

Place:

Rathyatra, Puri in district Puri and Berhampur in District Ganjam.

Made out of tin sheets cut into different shapes and welded together. One bogie is attached to the engine (Fig.-40). Wooden made engines, painted and decorated, some time with a chimney and light attached on top are also found.

Aeroplane**Material used:**

Bamboo, wood, synthetic colour and paint.

Place:

Banapur, Rathyatra in district Puri, Koraput.

A beautifully made aeroplane out of wood is shown in Fig-40. It is painted with white paint. Different pieces of wood are joined together by nails.

Bus**Material used:**

Wood and colour..

Place:

Lingarajyatra, Bhubneshwar.

A simple wooden bus, coloured, is shown in Fig-40. It has carved windows and a hook to which a string can be tied and pulled.

Car**Material used:**

Plywood and colour.

Place:

Digi in district Balasore.

Simple car made out of plywood with printed doors, lights and number plates is shown in Fig-40.

In addition to car, bus, engine, aeroplane, palanquins and carts toys, many other wheel toys and simple walkers are available in the state as play materials for young children. These are as below.

Elephant**Material used:**

Wood, paper and colour.

Place:

Manpur and puri in district Puri and district Ganjam.

An Elephant cut out of wood, painted is placed on wooden base with four wheels. Wheels are also painted (Fig.-41).

Swan**Material used:**

Wood, colours and nails.

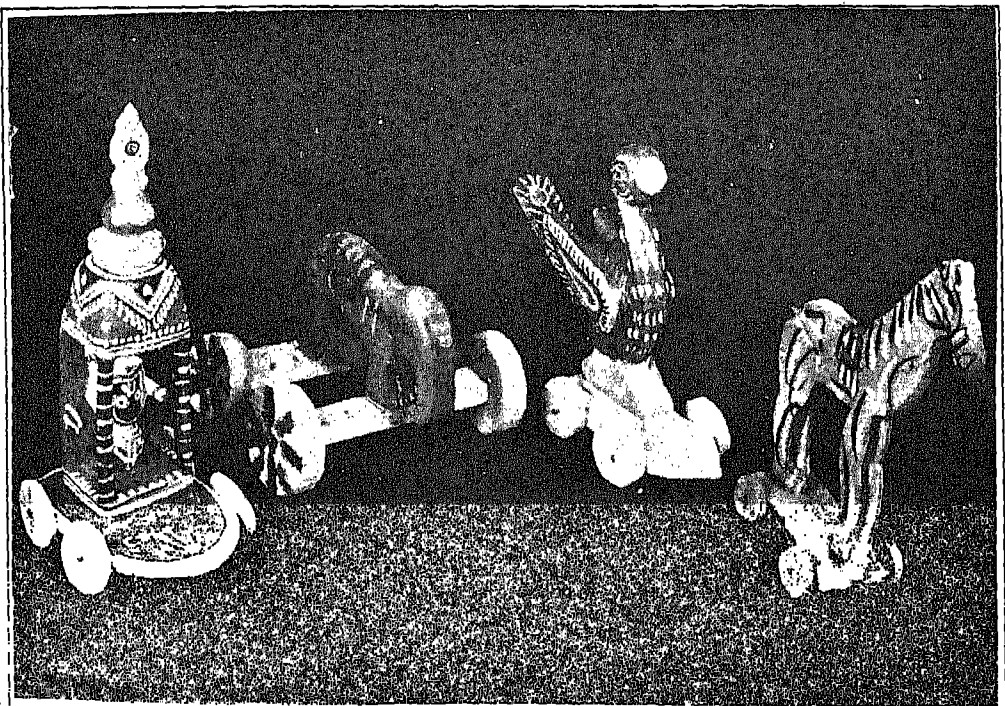


Fig. 41

Place:

Puri, Bhubneshwar.

A simple figure of swan coloured in blue and orange carved out of wood is stuck on a wooden base with four wheels (Fig.-41).

Horse**Material used:**

Wood, colours, paint, wire and nails.

Place:

Ganjam, Puri and Bhubneshwar.

Horse made out of wood is painted brightly. It is put on a wooden base with four coloured wheels nailed on it. The toy has a string to pull it forward. (Fig.-41).



Fig. 42

Jagnath Rath**Material used:**

Wood and colour.

Place:

Manpik pur in district Cuttack, district Ganjam.

A rath carved out of wood, with the wooden figure of lord Jagnath inside it is beautifully painted. The structure is build on a wooden base with four wheels. It can be drawn with a string. (Fig.-41).

Many other variations of four wheeled toys are found in different parts of Orissa. For example, a simple fish made out of wood is put on a triangular wooden base with two wheels and drawn by a string is available in district Ganjam. Like wise animal like dog and tiger on wooden base with whells are also found in district Ganjam (Fig.-42)



Fig. 43

Walkers

Colourful walkers made out of wood in different disigns are very popular among children. Some of the forms of walkers are depicted as fallows.

Butterfly Walker**Material used:**

Wood, tin and colours.

Place:

District Ganjam.

Two tin made wheels are joined together with a stick. A long, smooth and painted stick is attached at the centre of the joining stick. A butterfly made out of tin and coloured beautifully is placed on the top of the wheels in such a way that when child pushes the walker ahead the butterfly flaps its wings (Fig.-43).

Swan Walkers

Similarly a swan placed on the top of the wheels, flaps its wings as the wheel moves (Fig.-43 and 44).

It is available in district Balasore. Other variations are also available where wooden wheels are used instead of tin wheels. Some time, a ball, made out of tin strips after rolling the strips, is placed on the top of the wheels. Which rotates as the wheels move.

Plain Walkers**Material used:**

Wood.

Place:

Nilagiri in district Balasore.

Simple walkers, made out of wood painted white are shown in Fig.-43-44.



Fig. 44

Educational Potential and Guide Lines for their use:

All wheeled objects are a source of delight for children whether they are modes of transport, animals or birds. Pushing and pulling these toys makes for better motor coordination. It also promotes muscular development besides providing recreation and fun for children between the age 2-3 years.

The teacher can use them to help children observe the different modes of transport, they can count the number of wheels of all the wheeled toys, the shape and colour of toys and wheels can also be noted. The concept of big and small can be pointed out. Different types of trains and who drives a train can be a topic of discussion with the children. Different parts of an aeroplane, who flies it and the different sounds made by all

these modes of transport can be observed and pointed out.

Activities include taking the child to the nearest crossing and showing the different modes of transport. The children can also talk about traffic lights. Children can cut pictures of vehicles and paste them. The teacher can cut suitable pictures for the classroom for all the children. They can colour and paint by themselves when they return from an outing. Outings can be arranged to the aerodrome, station, bus stop. Different kinds of buses, mini bus, double decker, cars, private cars and taxis and so on can be pointed out. The teacher can sometimes use the walkers and the wheeled toys for distracting the children since they love anything that moves and makes a sound.

Wall Hangings

Birds, Alphabets and numbers

Material used:

Wood, paint, glue and mat.

Place:

Cuttack.

Different birds are carved out of wood, painted, stuck with glue on a long woven mat (Fig.-45) and hung on a wall with a wire or thread.

All the 26 alphabets are carved out of wood, painted in bright colours and stuck

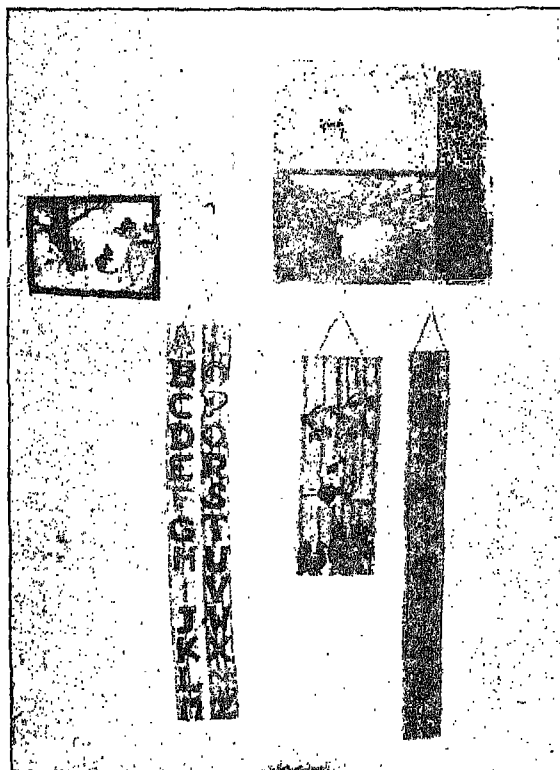


Fig. 45

with glue on long mat. On the surface of each alphabet designs in oddisi style are painted. (Fig.-45)

Similarly, numbers from one to ten are carved out of wood and stuck with glue on long mat. On the surface of each number painting in oddisi style is done to make it more attractive (Fig.-45).

There are models available for wall hangings, which are made out of clay as well as wood, brightly painted and hung with the help of a hook. In district Sundergarh a male figure as drummer and female figure as dancer are made out of clay and painted and hung on a wall with wire hooks.

Many scenarios are painted on wooden wall hangings for example - a tree with river flowing side by side and animals in the back ground.

In district Kalahandi and Sundergarh deer heads made out of either clay or wood are painted

and hung on the wall with the help of a hook or a wire.

In Cuttack, animals like horse (with a rider), lion, camel, rabbit, cow, bull, elephant, deer, giraffe, dog are carved out of wood and painted in different colours and stuck with glue on a long woven mat. In district Ganjam, carved out of coconut seed, an old man's face painted on it, is found. A wire loop is stuck on top of it to hang it on the wall.



Fig. 46

Educational Potential and Guidelines for their use:

Classroom walls are made colourful with articles of wall hangings and wall plates. A bright and beautiful class room encourages the flowering of the child's aesthetic appreciation. Some of these wall hangings are particularly useful for story telling, others can be used for developing cognition, and learning alphabets and numbers from artistically made charts. Wall vases can be used to teach the names of flowers by arranging one type of seasonal flower every day or as and when available. The exposure to beautiful things in the school environment increases the child's awareness as well as application of all fine arts in making his own life and home environment beautiful.

Religious Deities

Goddess Swarswati

Material used:

Clay, colour and cowdung.

Place:

Balimela in district Koraput.

A small image of goddess-swarswati made out of clay and cowdung, coloured in blue, red and yellow is shown in Fig.-46.

Lord Shiva

Material used:

Clay and colour.

Place:

Motiganj in district Balasore and Bolangir.

Placed alongwith Goddess Swarswati is the clay made, full sitting image of Lord Shiva. It is painted with bright colours (Fig.-46).

Lord Jagnath

Material used:

Clay and colour.

Place:

Gourshahi in district Keonjhar.

An image of lord Jagnath in clay, painted in white with the features, in black and red is shown. (Fig.-46)

Santoshi Ma**Material used:**

Clay and colour.

Place:

Motiganja in district Balasore.

Modelled out of clay and sundried is an image of Santoshi Ma. It is coloured in red and black. (Fig.-46)

Lord Ganesh**Material used:**

Clay and colour

Place:

Gourshahi in district Keonjhar and Odagaon in district Puri.

Made out of cowdung and clay is the image of Lord Ganesh. It is coloured in White. (Fig.-46)

Mother Goddess**Material used:**

Beewax, clay, brass and colours.

Place:

Sadeiverani in district Dhenkanal.

Modelled out of bee wax, clay and brass are figures of Goddess (Fig.-47).

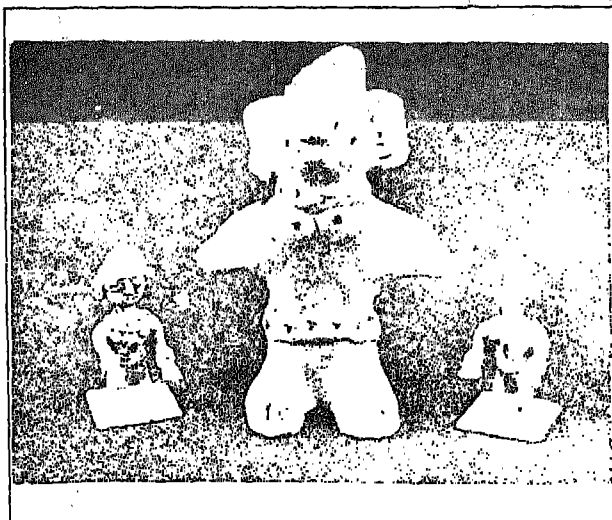


Fig. 47

Gandhiji**Material used:**

Clay and colours.

Place:

Baripada in district Mayurbhanj.

Bust of Gandhiji modelled out of clay, sundried and coloured with white colours. (Fig.-48)

Gopal bandhu**Material used:**

Clay and colour.

Place:

Shakigopal in district Puri.

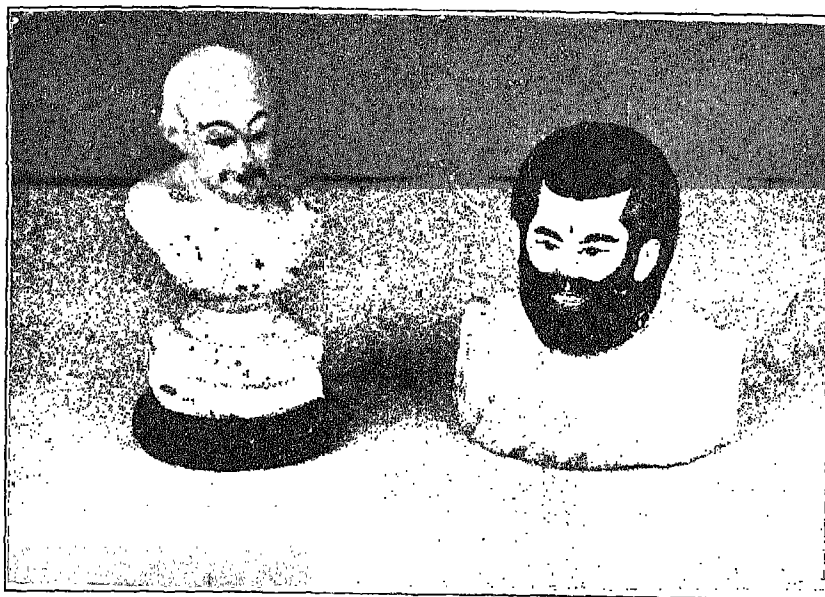


Fig. 48



Fig. 49

Bust of Utkalmani Gopbandhu Das, the founder of Orissa, coloured brightly is made out of clay. (Fig.-48)

Netaji Subash Chandra Bose

Material used:

Clay and colour.

Place:

Baragarh in district Sambalpur

A full size figure of Netaji Subash Bose is made out of clay, sundried, coloured brightly and glazed. (Fig.-49)

Prithiviraj and Sanjukta

Material used:

Wood and colours.

Place:

Baragarh in district Sambalpur.

Two figures- one of Prithiviraj and another of sanjukta, carved out of wood and painted beautifully in Baragarh style are shown in Fig.-50.

Shiv-Lingam

Material used:

Clay and synthetic colours.

Place:

Bhetkol in Districk Phulbani.

Modelled out of clay and coloured, the lingam has a snake on top and around it. The sides have little holes on it for putting the incense sticks (Fig.-51).

Educational Potential and Guidelines for their use:

Social Studies, social development and language skills can be facilitated with puja celebrations of various gods and goddesses during the respective festivals.

A puja corner can be made in the school as well as in the doll house where the children can conduct the puja. The children learn to do things together, to share, take turns, to enact roles of pundits etc. This helps in their social development. Conversation can range from its observation at home, sweets made or bought for prasad, new clothes to mother's role. With the 6-8 year age group children,



Fig. 50



Fig. 51

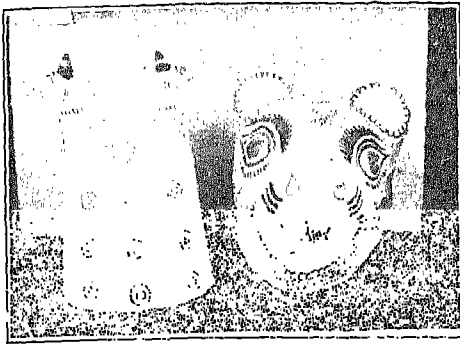


Fig. 52

attention can be focussed on details like the skin which siva wears and proceed to talk about wild animals, the snake around his neck and about reptiles, the river Ganga, Nandi bull and so on.

Each deity has some such interesting stories for children which can be narrated and enacted.

Activities can involve an outing to see a puja pandit, meet the pandit. Creative activities can follow, for instance, for Ganesh Puja an outlined figure of Ganesh can be filled in with crayons, collage, colour

paper collage, lentils collage etc. For Diwali children can paint diyas, cut and stick paper lanterns, roll cotton batis, make leaf and flower garlands.

Gandhiji father of the nation, Netaji, the militant revolutionary against foreign occupation and Gopabandhu beloved of the Oriyas are great men who will be loved and remembered for all times. For little children any thing said about them will take a real form if they can see concrete figures. All three are very popular in the east and the jayanty of each one is celebrated. For the child of today a stretch of time separates him from the deeds of these great men and could have meaning only if they could see pictures and figures of them. Prithiviraj Chauhan and Jhansi ki Rani besides being historical figures are the actual characters of many a romantic and courageous tales. These dolls present many possibilities for acquainting children with the glorious personalities of Indian history. Visits to the museum would be an ideal outing.

Masks

Masks designed out of papier mache are master pieces of craftsmanship and painting in Orissa. They represent God, Goddess, animal, birds and human beings some are described as below.

Deer and Bear

Material used:

Cloth, clay and synthetic colour.

Place:

Jeypore in district Koraput.

Mask of deer, with double deer head, of tribal Origin, is made out of clay, paper and cloth. It is sundried and coloured (Fig.-52) Mask of Bear to be worn on the head is made of clay, sundried and painted. (Fig.-52).

Ganesh

Material used:

Clay, cloth and colour.

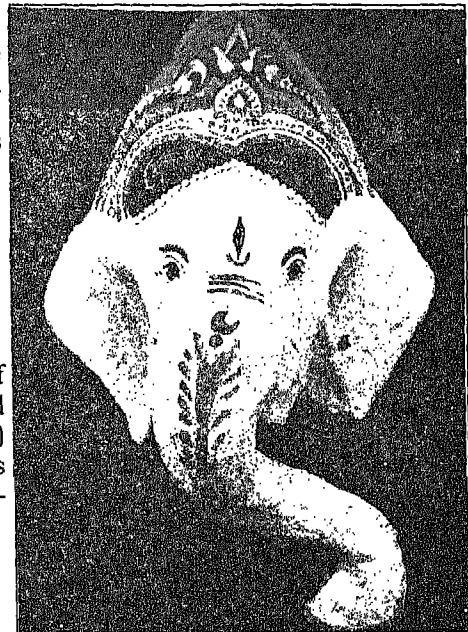


Fig. 53



Fig. 54

Place:

Jeypore in district Koraput.

Made out of clay, cloth and paper is face mask of Ganesh to be worn on the head. Painted in pink, red and black it is very light (Fig.-53)

Old man**Material used:**

Clay, cloth, jute and colours.

Place:

District Ganjam.

Face mask of an old man to be worn on the head is made out of clay and cloth is coloured brown. Jute has been coloured and used for the hairs, ears and moustache (Fig.-54).

Kali**Material used:**

Papier mache and colours.

Place:

Raghuraj pur in district Puri.

Made of papier mache, face mask of Goddess Kali is beautifully painted in yellow and black. This is very light and can be worn on the head. (Fig.-55)

Animal Mask

Various masks of different animals i.e. cow, monkey, tiger, deer and bear are found

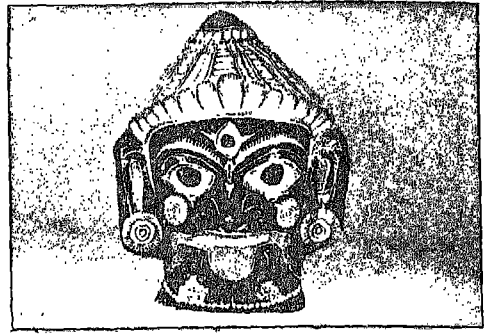


Fig. 55



Fig. 56



Fig. 57



Fig. 58



Fig. 59



Fig. 60

in different regions of Orissa. Majority of these mask were made available from Gogua village in district Sambalpur and Jeypore in district Ganjam. These are made out of papier mache using fine colours to paint them (see figure 56 to 61) In figure 59 a group of children bearing masks of monkey's are shown. In figure 56,57,58, 60 and 61 children bearing various animals' masks are shown as if enacting a story about animals.

Educational Potential and Guidelines for their use:

Masks are very popular with children, children love to put them on and dramatise. As soon as the child is behind a mask he enters the realm of fantasy. These masks can be used as aids for the development of their aesthetic sense, social studies, creative and dramatic activities and social development.

The animal masks can be used to help the children distinguish between wild and tame animals, their environment, sounds and movements like a lion's walk and a monkey downing or jumping. Each animal's mask can be worn and used to dramatise activities specially for the shy child who gains confidence behind a mask. Such activities also help to clarify speech and the child learns to speak clearly. A play or story can be enacted with dialogues developed by children. Each child learns to share and wait for his turn and also to work in a group thus promoting social interaction. The teacher can use the masks of gods and goddesses for teaching social studies. These masks can be used during festival time e.g. during Diwali, the story of Rama and Sita can be enacted by the children, like wise the festivals of Janmastami, Dasherra, Kalipuja and Krishnalila. The facial expressions on the masks help the children to enact the role expected of the character. One of the important purpose of the masks is to allow a diffident child to get over his shyness and take part in group activities, by initially taking shelter

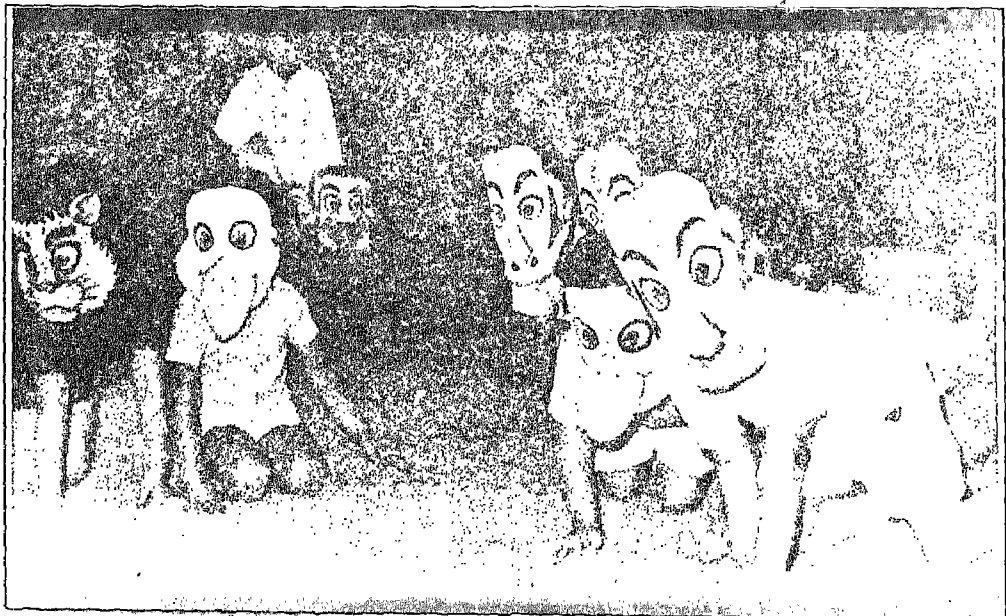


Fig. 61

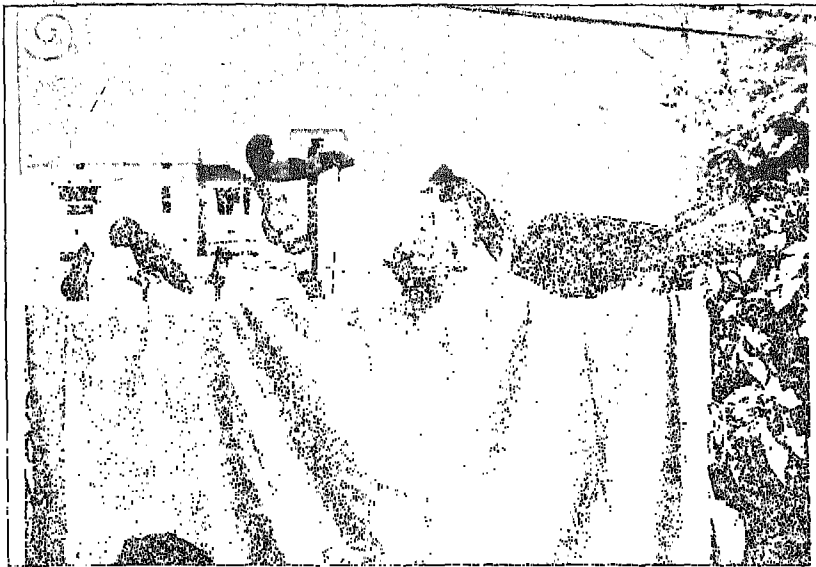


Fig. 62

behind the mask. Between the ages 3-5 years when children are usually unable to imitate facial expressions they can represent the characters more easily with the help of the masks. By the age of 6, however, they can be taught mime along with movement. The teacher should always be on the look out for simple stories which can be enacted with the minimum of effort and simple masks.

Activities can include colouring of masks cut out of chart paper for a particular story. Games can also be played e.g. the teacher can make masks of wild animals and tame animals and put the mask on the back of the child's head, so that he can see what he has got, he finds out about himself as he asks the others questions about where he lives, what he eats etc. Sounds of animals can make another lively noisy game.

Masks form a very important part of drama in Orissa and hence the diversity in their styles, prices and number. They however have no eye holes and are therefore worn on the head and not on the face. Whenever they are used on the face, in Chhau dance, the artist performs without being able to see. The duration of the performance for amateurs is short.

Puppets

Puppets of birds, animals, acrobats are commonly available in the state. These are made out of papier mache or wood. These are mostly stick puppets or string puppets.

Puppets of peacock, cow, parrot, monkey are available from khandpara in district Puri. Here the puppets are made out of Gambhari wood. In figure-62 a puppet of peacock made out of simple pieces of carved wood is stuck to a long stick. There are strings attached to head piece and tail piece of peacock. When pulled there is a movement in head and tail. Peacock is coloured brightly to make it attractive

to children. Next to peacock is a puppet of cow. The head of the cow is made out of two wooden pieces. The lower jaw of the cow is flexible joined by means of a wooden stick. A string is attached below it so that the jaw moves when it is pulled. Next to cow head is an acrobat exercising on a bamboo stand. When the two strings are pulled together the puppet performs acrobatics. Seen in the figure is a man acrobat. Likewise, monkey, girl, tiger, horse are also made as puppet of acrobats, (Fig.-62).

A brightly coloured parrot carved out of wood is stuck on a coloured wooden base with a stick attached to it.

Similarly puppets of various birds are made out of papier mache and stuck to a bamboo stick. As shown in Fig.-63 young children are with variety of hand puppets.

Educational Potential and Guidelines for their use:

Puppets take the children into a world of fantasy. They help to promote muscular, social and emotional development. All concepts are imparted easily through these imaginary comical characters.

The teacher can use them in the classroom to give messages to the child like drinking milk for better growth and brushing teeth every morning, among other things. Songs can be made more interesting through the medium of puppets. The children listen readily to any thing told to them by puppets. For developing language skills the teacher can make little stories and the children can also use



Fig. 63



Fig. 64

puppets to make their own dialogues and stories. Standing behind a curtain and talking with the help of puppets, helps the shy child to come out of his shell, and gain confidence. They also learn to take turns and wait for their turn to come. Through puppets the child is exposed to many adventures as the puppets which he is handling dances, sings and talks. Sometimes he is a fearsome tiger, a small and timid mouse or a clever fox.

Activities will include cutting chart paper into finger and stick puppets, and painting or colouring them. Simple puppets can be made by the teacher and kept in the classroom to convey any messages to the child like close your mouth while eating, making friends, sharing toys, hygiene and so on.

Story Telling Models

There are models which help in story telling sessions. Two such models are presented below.

Goat and Tiger seated on an Elephant

Material used:

Wood and paint.

Place:

Kalahandi.

A tiger astride an elephant and a goat astride the tiger. It beautifully illustrates a local popular rhyme "Hathi Bithi re basichi bagha bagha pithire chhele". The whole model is made out of wooden blocks, coloured beautifully (Fig.-64).

Elephant being bitten by alligator

Material used:

Wood, cardboard and paint.

Place:

Kalahandi.

An Alligator has a leg of an elephant in its mouth. Blood is oozing out. Vishnu's chakra strikes the alligator and kills it. It illustrates a local popular mythological story (Fig.-65).

Education Potential and Guidelines for their use:

Concrete objects illustrate a story and make it more interesting. They also help a child to verbalise and tell the same story specially when there is material to illustrate. It also helps him to place events in a logical sequence.

Conceptual development is promoted as the child is exposed to a broad range of experiences. They develop a desire to learn, to read and the ability to react critically to main ideas of the story. The story cards help them develop the ability to predict logical outcomes.

Language skills are promoted by (a) enrichment of vocabulary (b) exposure to good language models and (c) relating stories in sequences.

Social skills are developed as the child learns to use oral language more effectively and learns to share materials and experiences.

Emotional development is fostered as the child learns to become responsible for materials, and learns to express himself/herself in appropriate language.

Musical Instruments

Variety of musical instruments are available as play material for young children. These range from trumpets, rattles to damru, flutes and dholak. Some are described as below.

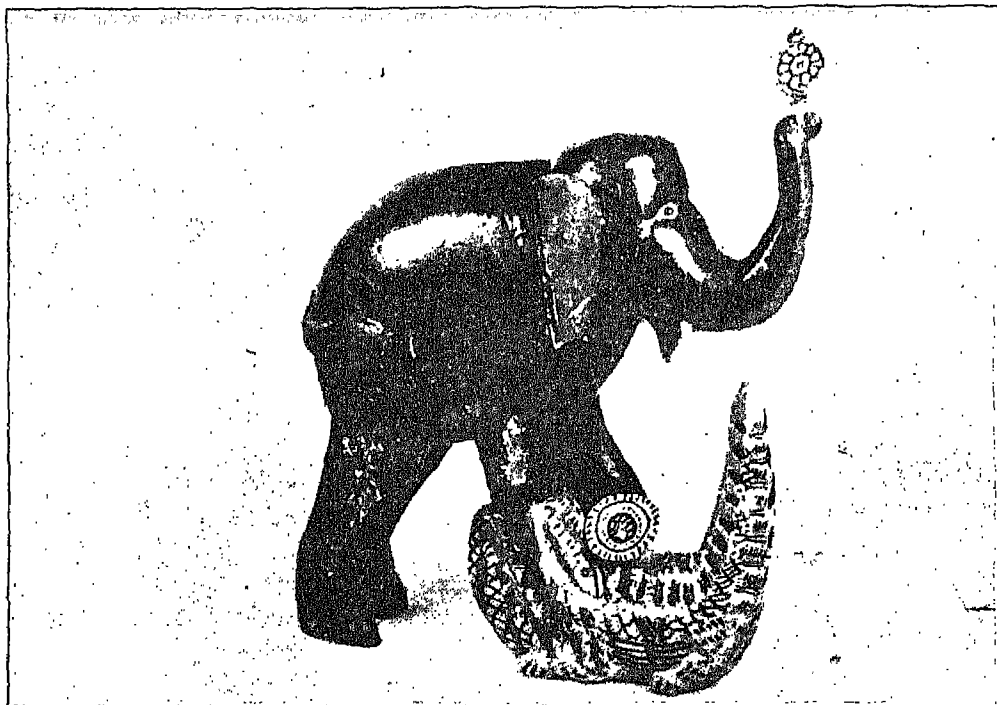


Fig. 65

Trumpets

Material used:

Paper, palm leaves and bamboo.

Place:

Gopinath, Goruala Rampada in district Puri.

Twenty inches and Ten inches long, two trumpets, conical in shape, having palm leaf tips on one end to blow air are shown in figure-66. When blown produces raucous sounds.

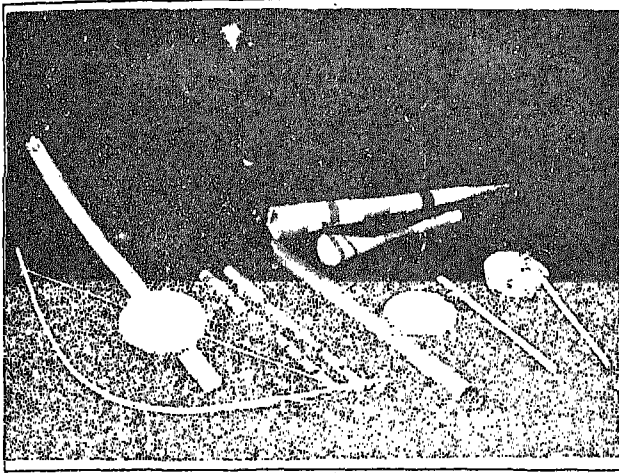


Fig. 66

Flutes

Material used:

Bamboo cylinder.

Place:

Parlakhemundi in district Ganjam and Meskarput in district Cuttack.

Flutes are made out of hollow bamboo cylinders in different sizes. The larger ones have six to eight holes and smaller ones have three to five holes. When blown from the mouth the long flute produces deep and mellow tone whereas small flute produces sharp and high pitched tone (Fig.-66).

Bengobaza

Material used:

Bamboo stick, lac, thread, tin-frame, paper and clay.

Place:

Deogarh in district Sambalpur.

A tin frame covered on both sides with paper and stuck with gum. A bamboo stick is attached to one side of it, with thread. A clay bowl is covered with paper. When it is rotated with the hand, it makes the bengo sound. (Bengo sound means sound made by frog) see Fig.-66.

Rattles

Material used:

Paper, tin frame, tin lever, small stick, bamboo, palm leaves, small stones, wood, wire and springs.

Place:

Puri and Nayagarh in puri district and Kulbera in district Sundergarh.

A tin frame covered with paper on both sides and fixed to a long stick with wire. A small stick is fixed with a rubber band to this wire. On the long stick is a tin lever. As it rotates the stick beats against the side and makes a loud sound (Fig.-66).

From Beautifully coloured wooden cylinder with shaft in the middle are made popular rattles. On both ends of the wooden cylindrical piece are connected wooden knobs with the help of springs. When moved from one side to another it gives rhythmic sounds (Fig.-67).

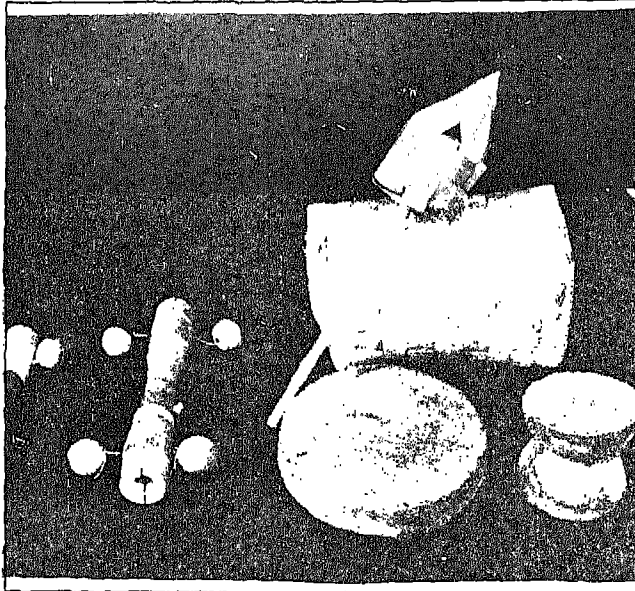


Fig. 67

Rattles are also made from the thin bamboo pieces. These strips of bamboo stem are woven like a mat. Some stones are kept inside and woven from all side in to sealed box. It is played by holding it with both the hand. (Fig.67) Rattle made out of palm leaves have a stick attached to hold it. (Fig.-67)

Khanjani

Material used:

Clay, parchment paper.

Place:

Cuttack.

A clay ring covered with parchment paper makes a sharp sound when held up

in the left hand and struck at one end with the tips of the fingers of other hand. (Fig.-67)

Damaru

Material used:

Clay, parchment paper, thread and stick.

Place:

Cuttack.

A damru made of clay, covered on both side with parchment paper. At the centre a button or a bead hangs from the thread. As the damru is turned from left to right or vice-versa the button strikes each parchment making sharp sounds. (Fig.-67)

Nagara

Material used:

Clay, leather, white colour.

Place:

Sundergarh.

Earthen bowls are painted white and covered with leather and tighten. It produces a resonant sound while played with a stick. (Fig.-68)

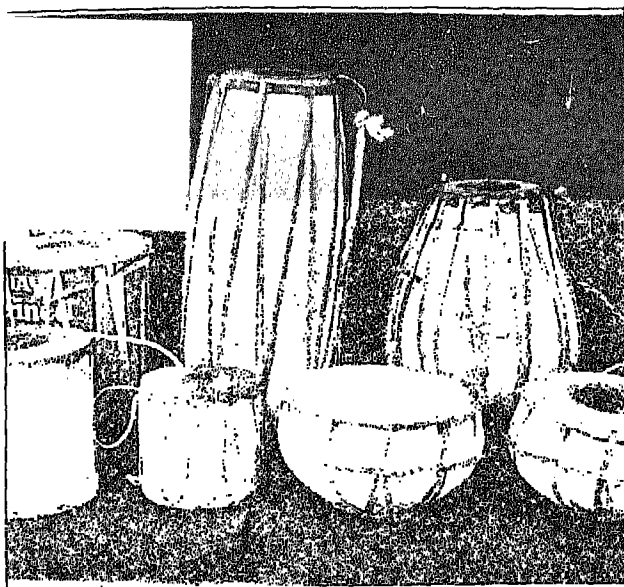


Fig. 68

Pakhavaja**Material used:**

Wood, leather, white paint.

Place:

Sundergarh district.

A tribal pakhiavaja made with wooden vessel and covered tightly with leather. This is painted with white paint (Fig.-68).

Dholaka**Material used:**

Clay, Tin box and leather.

Place:

Terepara in district Sundergarh.

The dholakas (Drums) are in two sizes. These are either made out of clay or tin boxes. Calf leather is stretched and covered on hollow sides. These produce good sounds like original drums. (Fig.-68)

Educational Potential and Guidelines for their use:

Musical Instruments provide great joy to children. They help in the development of motor coordination, auditory sense training, concept formation, social development, sense of rhythm. They help in the development of the ability to blow and the development of the facial muscles. Children can also be asked to discriminate between the sound of large and small flute which played behind a curtain. They give the concept of movement, move in a circle, clock-wise and anticlock-wise,



Fig. 69

fast and slow movement. It helps in learning the easy rotation of the wrist. These can be used for dance drama, counting the number of beats. It can be played faster and slower. The children can march forward and backwards with the beat of the drum. Some develop the technic of wrist movement in an easy rhythmic way.

All these instruments can be used as part of group activities like the school band and marching to different rhythmic pattern during outdoor play. In the school prayer the children should be acquainted with the use of trumpets in puja, in temples. Each musical instrument can be played behind a curtain and children can be asked to name it as well as from which direction the sound of the instrument is coming. Instruments can also be used for dance, drama, singing and puppet shows. Group activities can also include making of simple instruments like a rubber band stretched on two nails and pulcked with the fingers. Match boxes and small tins with pebbles inside, covered with colour papers can be used as rattles. Cold drink covers stuck with nails on a stick can be used as rattles also empty 1 kg. and 2 kg. tins can be made into drums.

Play Material for Cognitive skills

Measures

Material used:

Bamboo and bamboo strips, Brass, Bark of tree, clay and paints.

Place:

Gobripakunda, Balmela in Koraput, Birmitrapur in Sundargarh district, Paikia Boudhkhanda, Gudabalipada, Baoudhkhanda in district Phulbani, Jangiri, Ganed in district Dhenkanal, Batranati, Baripada in district Mayurbhanj and pipili in district Puri.

In rural Orissa measures in different forms and styles are used till to day. Materials used also vary from palm leaves and bamboo strips to brass, wood and dhokra metal. Some are presented below.

Baked clay pots of different shaps and sizes are shown in Fig.-70, 70a and 70b. These are definite measures of weight used in transaction till date. Also shown in the figure are three measures made out of bamboo. Broad side of bamboo is cut in to three pieces and coloured black. The miniature forms are used as play materials for young children.

Equally useful as play materials are different sized and of different measures bamboo made containers, as shown in Fig.-71. Some are made of tree bark. Bark of siyari tree is used in Harchandpur in district Keonjhar see Fig.-72.

Pots of different measures are also made out of dhokra metal. These look like antiques because of the process of production and the tribal designs. (see Fig.-73 and items on right hand side lower end in Fig.-70).

Two measures made from bamboo, but covered elaborately with papier mache and cloth and painted with liquer colours with a women's face and other designs all round it (Fig.-74).



Fig. 70



Fig. 70 a

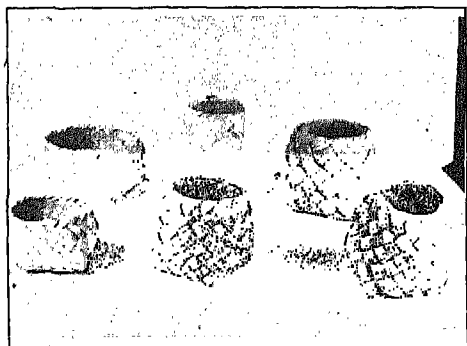


Fig. 71



Fig. 70 b



Fig. 72



Fig. 73



Fig. 74

Mats**Material used:**

Golden grass.

Place:

Rasgovindpur in district Mayurbhanj.

Mats woven in different sizes and shapes are shown in fig-75. All five mats in round shape are of different size and made out of golden grass. There are rectangular mats shown too in the figure.

Baskets**Material used:**

Palm leaves.

Place:

Rasgovindpur in district Mayurbhanj and Puri. Five elaborately woven palm leaf baskets which fit into each other, square shaped, and baskets made out of golden grass, round in shape and decorated around with diamond shapes feature and pink colour are shown in Fig.-76. Children playing with these baskets are shown in Fig.-76a.

Oval and round shaped baskets made out of golden grass are shown at extreme right and left corner on the upper side of Fig.-75.

Nesting Jar**Material used:**

Kataranga wood.

Place:

Khandapara and Banapur in district Puri. Made out of wood is a set of five nesting jars as shown in Fig.-76.

Made out of pieces of bamboo, a set of nesting Jar is shown in figures 76a, 76b,

Bow and Arrow**Material used:**

Cane, Bamboo and colour.



Fig. 75

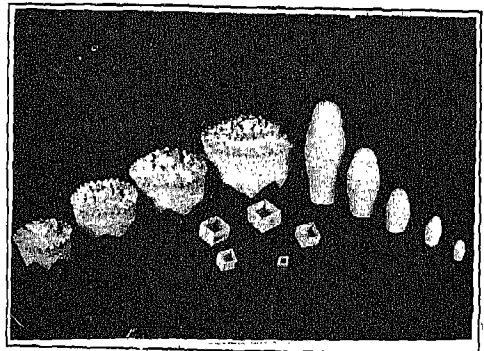


Fig. 76

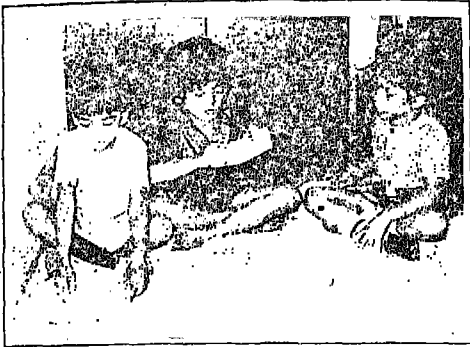


Fig. 76a



Fig. 76b

Place:

Malkangiri and Chitrakunda in district Koraput. A simple bow and arrow made out of bamboo and cane is shown in Fig.-77.

Catapult

Material used:

Wood, clay and rubber.

Place:

Kouwingi Chitrangada in district Koraput.

Catapult is made out of wooden piece. It is connected at lower end tied with thick rubber having a leather piece in the middle where the clay ball rests. (Fig.-78)

Educational Potential and Guidelines for their use:

These toys provide great enjoyment to the child for house play and aid in scientific activity, number play and language play. Playing in a group also encourages social development, developing the concept of shape and size and seriation and can be used for measuring liquids and solids like sand, seeds, grain in science activities. Some are excellent for muscular development and eye hand coordination. For example the teacher can make a figure board with numbers from 1 to 10 and ask the child to aim. The number of stones he aims can also be counted. Some are good to feel the texture of the article on both sides for the development of the concept of rough and smooth, for the holes in the tin are perforated and this makes one side rough and the other smooth. As the child uses pressure while pressing down to imprint the design, this activity also helps



Fig. 77



Fig. 78

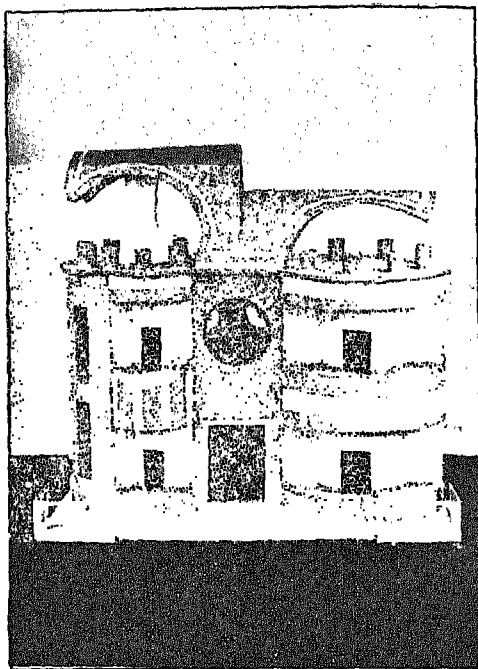


Fig. 79

muscular coordination. The baskets can be used for storing grains, stones, leafs, beads and their texture and size can be noted.

Play Material Made Out Of Urban Waste

The focus has been, till now, on rural and local specific play materials. In this chapter, the focus is on that material which has been made out of urban waste.

Houses

Material used:

Card board, glass, wire and colours.



Fig. 80

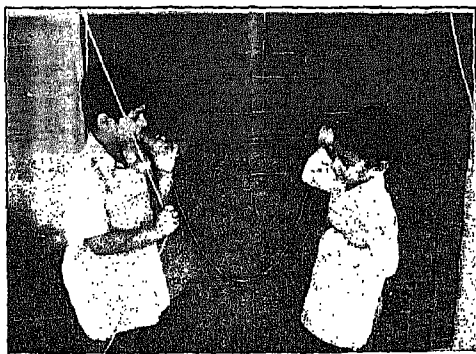


Fig. 81



Fig. 82

Place:

Umerkote in district Koraput.

A big model of a building made from urban waste like card-board, wire and glue. It is painted in red, yellow and blue. (Fig.-79).

A cottage made of corrugated cardboard and coloured. The sides are stitched by thread (Fig.-80).

Dolls**Material used:**

Cloth, cotton and wool.

Place:

Balimela, Umerkote in district Koraput, Ujaipur and Sundergarh in district Sundergarh.

Cloth doll made with cotton stuffing and dressed in saree and blouse and hair styled into a bun. (See Fig.-80).

Dogs**Material used:**

Plastic cane and beads.

Place:

Balimela in district Koraput.

A dog made from blue plastic cane. It has two beads for its eyes (Fig.-80)

Mat**Material used:**

Cigarette Covers.

Place:

Koraput.

Empty cigarette covers are woven and folded into a square shape. It can be used as a mat for sitting down (Fig.-80).

Phone**Materials used:**

Paper, thread, cloth piece.

Place:

Barabazar, Barapada, in district Mayurbhanj.

Two cylindrical shaped paper made pieces are connected with each other with a cotton thread. The cylinders are covered with cloth and cover paper to make a telephone. (Fig.-81).

Bird**Material used:**

Cloth and paper.

Place:

Lingrajgatra, Bubneshwar and Puri.

A bird made from paper and cloth. Stuffed with paper its nose, eye and wings are made out of paper (Fig.-82 third item from left).

Tin Painting**Material used:**

Tin and paints.

Place:

Koraput District.

An empty tin cut into half and painted black. On the front side the figure of a child is painted (Fig.-82 1st item from left.)

Plastic Bottles**Material used:**

Plastic bottles and paint.

Place:

Balimela in district Koraput.

A plastic bottle is cut and decorated with art paintings. It can be hung on the wall with the help of a thread woven through two holes made on the top of the plastic bottle. (Fig.-81 Second item from left).

Bulb**Material used:**

Cardboard, bulb and paint.

Place:

Balimela in district Koraput.

The picture of a lady painted beautifully on a fused bulb and coloured and placed on a cardboard base. (Fig.-82 second item from right).

Coconuts**Material used:**

Coconut shells and paints.

Place:

Balimela in district Koraputs.

Empty coconut shell is decorated with art paintings and used as Flower vase. A rose is place on it. (See Fig.-82 1st item from right).

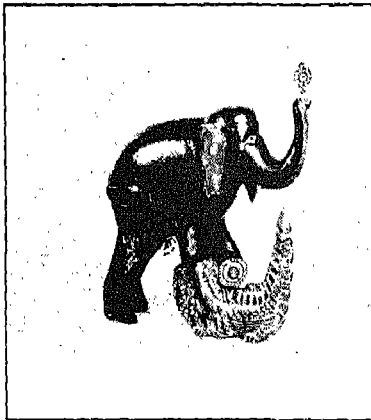
Educational Potential And Guidelines For Its Use:

It is not always necessary or possible to buy expensive toys. All around us we find a surfeit of waste and discarded materials which, if imaginatively used, make excellent toys and teaching aids. The toys collected above are only a sample of the hundreds of toys that can be made by the teacher as well as the child.

Collecting waste materials by asking the children bring discarded things from home. Bulbs and egg shells can be used to make puppet head, plastic bottles used for water play, keeping flowers etc. Objects can be made and used for house play, imaginative games and dramatic activities. It can lead to many interesting activities and utilising the large variety of waste materials collected.

Teachers in balwadis can use these to make equipment for number play, language, colour, weight, size, musical instruments and so on.

DRAMA, DANCE & PUPPETRY IN ORISSA



There is an increasing awareness amongst the people in the field of Education of the unrivaled role of drama and other dramatic forms like puppetry and dance dramas in the balanced development of a child's personality. Its role in pre-schools and primary schools cannot be minimised. These are excellent creative outlets for a child and his imagination. They help the child develop confidence, poise, better physical control and natural body movement. It is a motivating force in the child's intellectual growth as he begins to observe people, situations, sounds, characteristics of creatures in his environment, and convey this to others through

vocal and facial expression and suitable actions. He not only develops fluency of speech and better verbal expression, but also learns to think, reason and understand as he puts life into the characters he creates, gives them feelings and thoughts and solves the situations he puts them in. The spirit of cooperation and team work is inculcated as the group practices and performs. A sense of responsibility and helpfulness is also created.

Drama and puppetry have been successfully used as aids for teaching children with minor speech disabilities. They work wonders with shy and diffident children, handling a puppet behind a curtain or enacting a role behind a mask, to emerge out of their protective shells. Strong emotions like anger which a child is normally taught to suppress can be experienced and controlled by enacting them. Dance is being increasingly used for the social rehabilitation of psychologically injured children and as a means of releasing pent up emotions and excessive energy. So many unfulfilled desires are satisfied when the child escapes into the world of fantasy created by drama and puppetry. Folk dance, normally a group activity, retains its unique position as a means of physical education and socialisation. It can be used effectively by the balwadis in conveying important messages on child rearing, health care, nutrition and family planning through this media.

Orissa has an unparalleled and rich legacy of dance, drama and puppetry, which lies unexplored for educational purposes. The force of Orissa drama lies in its immense variety and popularity as the peoples' theatre. It ranges from jatras of many kinds performed by a group of artists, 30 to 60 performers, to solo

performers like in bohurupi, ghauta patua, jogi, ghuduki, dhankoila and janughanta. Unfortunately it has become restricted in recent years to open air village performances only. The jatra has the wonderful techniques of involving the whole village as a part of performances sometimes e.g. in the Dhanu Jatra of performances being a part of the audience, rising to go into the arena only when their rôle has to be enacted as in Bandi nata. They have an additional advantage of not requiring green room or change of costume. Other popular forms of folk drama besides the jatra are the 'Danda Natch', Ramalila, Pala, the Dasa Kathia, the Mogol tamasa, the Kerna & the Patua. Also in existence is the most ancient form of dramatics stories narrated dramatically with voice modulations, dialogues and occasional actions like in Galpasagara, Kathaka, and Harika. What is of great relevance is the presence of a children's theatre too. Radhapremalila is jatra performance by children only all below the age of ten. Raslila is performed by children (boys only) between seven to twelve year near Itamati (Puri district). Performed with the help of marionettes operated by adults to give authenticity to the scene, it has a musical accompaniment of about hundred mrindanges. Munda Pota Kela is an entertainer of children. He puts ash on his face and a split mango stone on his nose, plays a 'changu' and dances in various awkward poses, telling stories doing mimics and generally acting a man dressed as a bear or tiger walks and dances to the beat of drums through the village.

All these forms of drama have in common music, singing, plenty of dancing, some humourous characters and witty dialogues. Except for the pala which shows muslim influence and choose secular themes the rest of them deal with stories from the Ramayana, Mahabharata, Puranas and folk tales. To keep up with the changing social pattern the themes of the common Jatra and opera have been altered to suit modern tastes but most of these have borrowed heavily from the Indian cinema and are outside the life style of the common oriya.

Puppetry or 'Khandei nacha' in Orissa is as varied and perfected an art form as drama. Professional puppeteers and puppet makers exist in all parts of Orissa. They make and use a variety of puppets. Glove puppets from Jagatsinghpur and Kendrapara of Cuttack district, string puppeteers from Jeypore (Cuttack) and Nayagarh (Puri), Bhapur (Dhenkanal) and Bhanjanagar (Ganjam). We have active performers of rod puppets at Keonjhar. Shadow puppetry (Ravana Chhaya) in Dhenkanal is unique, using five hundred puppets of leather for one performance. Interesting finger puppets are found in Ganjam. Professional puppetry is a strictly family tradition-puppets are made by them and for them and not sold in the market. Some wandering minstrels also use a puppet while singing ballads to the musical accompaniment of a khanjani. There are no puppet plays and the puppeteer uses opera suitably altered for the shows. The rod puppeteer uses spontaneous dialogues and is an expert ventriloquist. The puppet show is conducted by the sutradhar with three or four instrumental musicians. In the string puppet an important character is the jester or andiripua dhaba. The stage is a very simple construction made with sheets of cloth behind which the puppets are operated. Some puppeteer use larger than life puppets.

Folk dancing is also very widespread and popular and it only needs an occasion -

religious or mere merry making. The type of dances performed in Orissa are innumerable. Oddisi, the classical dance of Orissa and Chhau the martial dance of Mayurbhanj, Seraikela and Dhenkanal are internationally known. Commonly known to every villager, however, are dances like Dandanata, Gauribeta Bandana, Jhuna khela, Parava, Patarasaura, Chadaya, Sapua, Beidhana, Kerna nacha, Naga nacha, Ghumura, Dalkhei and Chaiti Ghoda to name only some.

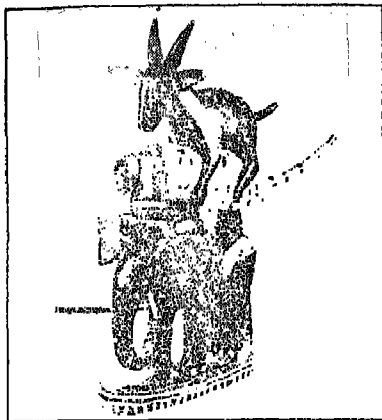
The making and use of masks in dramatics and dance is another Oriyan tradition which can be gainfully utilised for children. There is an amazing variety of masks available. They are made from papier mache, bamboo and wood. They range from 50 p. each to Rs. 150/-, the former being light and simple made from paper and glue and coloured with water colours. Others are of better quality elaborately painted and more stylised. The masks used in Chhau dances of Saraikela are sophisticated and beautiful master pieces.

Though like the traditional drama, these art forms are on the decline in the cities, they exist because of the continuing village patronage. No one in the village needs an invitation to performance, crowds thrown to the jatra, dance and kondhei nacha. The point which emerges is that every child in the village is exposed to drama, dance and puppetry from infancy and grows up watching these performances all night and frequently performing in drama when child artists are required. It therefore, requires an imaginative teacher to draw on this store house of ideas, introduce these relevant to the growing child today and organise dramatic sessions, dramatising stories using puppets.

The SCERT Orissa at Bhubaneswar has drawn up an elaborate Curriculum on Art and Aesthetic Education for Classes I to V, to utilise this rich heritage of dance, drama and puppetry and to provide better opportunities for the development of well balanced personalities amongst the children in Orissa today. A similar curriculum is also applicable to children below six years of age. School teachers of pre primary and primary schools must keep the objectives in view viz to provide opportunities for self expression and perfection in enacting emotions, enacting of interesting characters, imitation of people and creatures in our environment, sounds, expressions, dramatising little stories narrated to or by them as well as organising performances atleast once a year in their respective schools. Theatre for children is equally good and we have as planners the little theatre in Calcutta, Sutradhar a puppet theatre in New Delhi and Darpana in Ahmedabad. Their help could be taken to start a similar movement in Orissa where there is tremendous talent and a culture replete with all forms of dramatic activity for children and by children.

Dhiren Dash has such a movement in mind based on his research in Orissa drama and he is hopeful of getting it under way soon.

TRADITIONAL GAMES



Games and sports are as old as history of mankind, there is evidence of these in our cave paintings and ancient texts. Children have never lacked time or interest in play. Our concern for young children has, once again, focused on the use of games as an effective means of learning particularly in early childhood. Schools all over have become mental workshops where fun, laughter, creativity, activity and exploration are either non-existent or take second place. Fun is the birth right of every child, essential to his process of growth both physical and mental. We have to ensure that learning is interesting, creates greater involvement and better assimilation of

concepts from practical experiences and play. Hence the rethinking and reshaping of school curricula to use games for relaxing a tired mind as well as for purposes of teaching.

There is an element of universality in the games played by children, variations of these are played in every state of India and all over the world. Beginning with mother games or perhaps parent games where the child from infancy plays with either parent to neighbourhood games and then to more organised games with formal rules and umpires.

A representative collection of games played in every village of Orissa is presented. Children in cities play too but opportunities are less due to long distance, less time to play and piles of home tasks to finish. Besides the old traditional games have taken a back seat on account of the western versions becoming more popular and acceptable.

Presented in the collection are games for babies and other games both indoor and outdoor, for children upto eight years of age. A large number of games have rhyme or song accompaniments.

Infant Lullabys and Games

Bayi Chodei re bayi chodei

To ma jayichi gai chorei

Tenu anithibo pachila belo

Rama (name of the child) khai kori hoibo gelo.

Dho re baiya dho
Jo Kiyari re goholo mandia
Sei kiyari re so re baiya

□□

Aa jonho mamu sorogo sasi
Mo kanhu hato re porore khosi
Mo kanhu ghoroto bahut duro
Kohi paribu ki taro khobero

□□

Baya chadhyi re baya chadhayi krusna duarku ah,
Krusna sangatare khali buli sari dudha pie dei ja.

□□

Jhul re hati jhul
Baha pani khat phul
Hathi jhuluthai me kole bosi
Boro Dalo Khaibaku
Mo Munna jhuluchi ma kole basi dudho bhata khaibaku.

The mother teacher stretches out her legs and seats the child on them and holds the hands. She swings the child back and forth as she sings the song.

□□

Gugu Panchi gugu panchi
Bhato randhi bu ni
Dali randhi bu ni
Bapa ku khaiba ko delu ni
Ma ku khaiba ko delu ni
Guho gadia re padibu na
Suna gadia re padibu

The mother lies down and bends her knees. On her legs she puts the child and supports him from the back with her feet. She swings the child up and down and on the last two lines of the song either throws him down (gently) on the right side or the left side of the bed, the game continues like this.

□□

Pano dou chuno dou, khairo dou gua dou
Mosala dou buji dou
Kalia bolodo golare golare
Hindi khur khur korla

The baby's palm is held open by the mother. With her other hand she presses on the palm as she sings the song. At buji dou (at the end of second line) she closes the fist of the child and tickles the child under the arm.

□□

Heita (hide and seek). Mother or any other adult hides behind a curtain peeps out and says 'heita'. Babies enjoy this a lot and are soon playing it too.

□ □

Macho dhor Macho dhor bengo dhor.

The adult holds out the forefinger and thumb and turns the wrist fast. The child has to catch the forefinger as he tries to hold it the thumb is turned around. If he gets the forefinger then its his turn to play.

□ □

Ros khos singa bulbul mastak
Is miskha khis mis
Mo juta kar polish
Mu jibi office

This is played with the fingers. Father holds each finger in turn as he repeats each word.

□ □

Tati tati puri, Ghio macho moori
Hum khayega tum khayega, dhorta kano moori.

This can be played by two children or more. Two children face each other and by turns act out the song and holds the other child's ears and goes up and down four or five times. Then it is the other child's turn.

□ □

Iti kili Mitikili phuti gola kaincho
Tumoro amora nali paincho
Nali pen pen bajoi hira
Goti ko upare gotia jira
Ambo pache panose pache
Ta thei thei neulo nache
Neulia bhai seulia
Kote na pote.

A group of children play this game sitting in a circle. Hands are spread out flat in front of them on the ground. One child starts the rhyme while pointing to each finger. Where the rhyme ends, that finger is folded back. As soon as all the fingers of one hand of any child are turned in, he holds the ear of the child next to him. The game continues when all are holding each other ears they go up and down and the game ends.

A variation to this game is holding the ear of the child as soon as one finger goes in. The rhyme with this is as follows:-

Inchidi minchidi dhai chidi chidi
Koinchi kakuri nolita pita

Sato bohu mero sato duhita
 Sato goleutoto
 Dein poila pitolo
 Pitolo hondi ku hojila
 Nako tun tun bajila
 Sanu bohu luga kapod kapod.
 Bodo bohu luga uthila

□ □

Tuk musi kukei musi
 Dhano bharono ku khautha posi
 Dhano kha chaulo kha
 Phur kine uriya.

The mother holds the child's palm out and taps on it with the index finger while reciting this rhyme.

□ □

Out-Door Games For Infants

Gol Gol Rani

The children make a ring and one child stands in the centre. The others go around saying "gol gol rani" kete kete pani". The child in the centre begins with he feet "pade pade pani". Again "gol gol rani kete kete pani" "anthue anthue pani" (ankle) and so on to cover "pete pete", "Chhatie chhatie", "nake nake", "munde munde".. As soon as the head is reached the child in the centre tries to run out and is chased and caught by the others.

Chauka Chauka

Chauka chauka Bhauri
 Mamu Ghoru chouri
 Maku mote maile
 kete kotha kohile
 Ma mote dhoila
 Dudho Bhato Khoila
 Mo pori ke nahire
 Suna pila muhi re.

This is played by little children and they move in a circle holding hands while they sing.

□ □

Mi Mika

Any number of children can play. Two children cross their arms and hold hands and face each other. They jump as they sing

"Mi mika maniko raja,
Singho dui ta joja joja
Eka singho re manusa mare
Dui singho re pahar tare."

As the rhyme finishes they start moving faster faster till they tire.

□ □

Eye jeera ku sei jeera
Dein posila kila jeera

Any number of children can play. Two children hold hands sing the above rhyme. As it ends they stop and turn around while holding hands. Begin again. It can be played as many times as they like.

□ □

The children stand and kick their legs forward as they sing

"Thia puchi narango
Godo dui ta sarango
Sarango badi ku jai thili
Sarango kuli anithili
Ade thila meetha
Ade thila bhoja
Ke khai bo asore
Godo ku lambel bosore".

Immediately the children sit down with their legs stretched out. Anyone left standing is out.

□ □

Germination Game (Dramatic play)

5 to 6 children sit with their legs stretched out one behind the other. One child becomes the farmer. He goes round tapping each child on the head. In the first round he says Hala Kerun, second round Pani dou on third round Monji potun fourth round pani dou.

Then he comes around to see how the plants have grown. The children do the following actions each time he comes.

1. One finger raised on the head to indicate a plant.
2. Both hands raised together to indicate flower.
3. Both hands raised slightly apart to indicate the pumpkin
4. 5 and 6. The pumpkin grows larger the hands far apart on the head.

Then another child comes and stamps his feet. He is the messenger from the Raja. Farmer says

Messenger: Ete rati re kete kam
Mu raja ghoru kotuala
Cabard khulo

Farmer: Tu kai ki asuchu

Messenger: Raja karu kukoro marijaichi
Takoro bhoji pai gute kokharu dorkar"

Farmer: Asi ki chipi chapi ki nejja

The messenger goes to the children, presses their heads, looks around and takes one away. This happens till only one child is left.

The farmer says Mu eyta ne ke khaiki and eats up the last pumpkin himself.

Indoor Games For 5 to 8 Year Olds

Bohu Bohu Ka Khelo

A specific role playing game encouraged and played in all homes all over Orissa. One child becomes a mother and other a cook and so on. Small sarees are specially made and worn by the children. This game can also be played by younger children.

Kacho Kauri

This is played with four different coloured broken bangles and a dice made from four tamarind seeds scratched on one side.

Played by a minimum of two and maximum of four children, the child who turns up the scratched side of all the tamarind seeds, starts the game. A simple form of ludo, it is played on a board. The move being counted by the scratched sides of the dice. The player who reaches home base first is the winner.

Chhoki Sun

It is played by two players one putting noughts and one crosses. As soon as a diagonal or straight line of noughts or crosses is made by a player the game ends

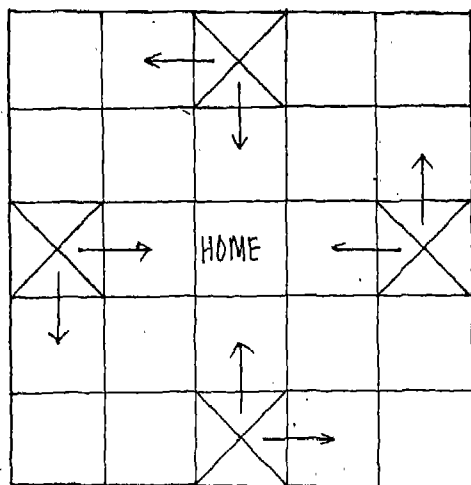


Diagram 1

in his favour. It can be played repeatedly to win points in each player's favour.

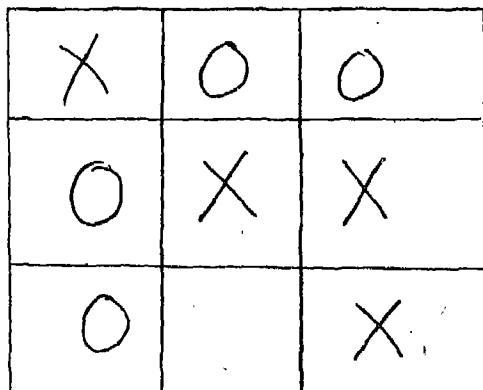


Diagram 2

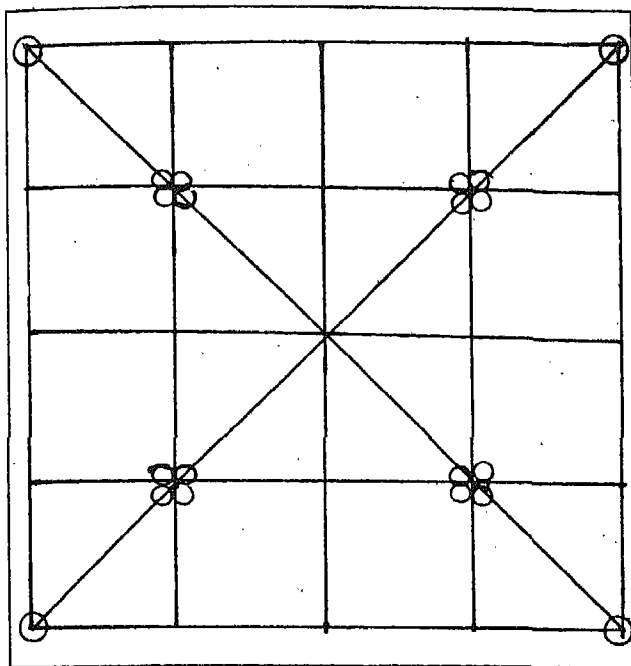


Diagram 3a

Games with Broken Bangles;

(a) Pieces of bangles are kept on both palms held together flat out. The player throws up the pieces to let them fall on the inside i.e. the palm of the hands and at the same time to get one piece between two fingers. Holding that piece he picks up the rest which have fallen and then throws them up again to catch them all. The player then claims the one piece held between the fingers. It continues till the player is unable to get one between her fingers. Then it is the turn of the next player.

(b) Played by 4 or 5 children. A circle is drawn on the ground and all broken bangles are put inside. Each

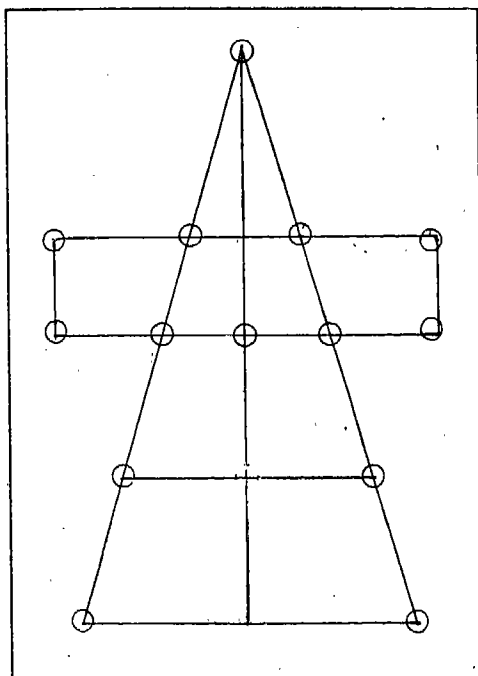


Diagram 3b

player gets one piece, with it they try by turns, to press the broken pieces and throw them out of the circle. whoever throws out the piece gets it and the one who gets the most is the winner.

Bagho Chhell is played by two children on a figure.

On the outer corners are four tigers represented by four big pebbles which belong to one child. The other child has twenty goats represented by twenty small pebbles. The contest between them lies in that the tiger tries to eat up the goats and the goats try to imprison the tigers. The tigers and goats move only on the corners of each square and can move diagonally only on the diagonal lines. If the goat and tiger are placed on two corners on the same line and a third corner is free the tiger can cross over and the goat gets killed - unless the other player prevents this by putting a goat in the empty space (diagram-3a).

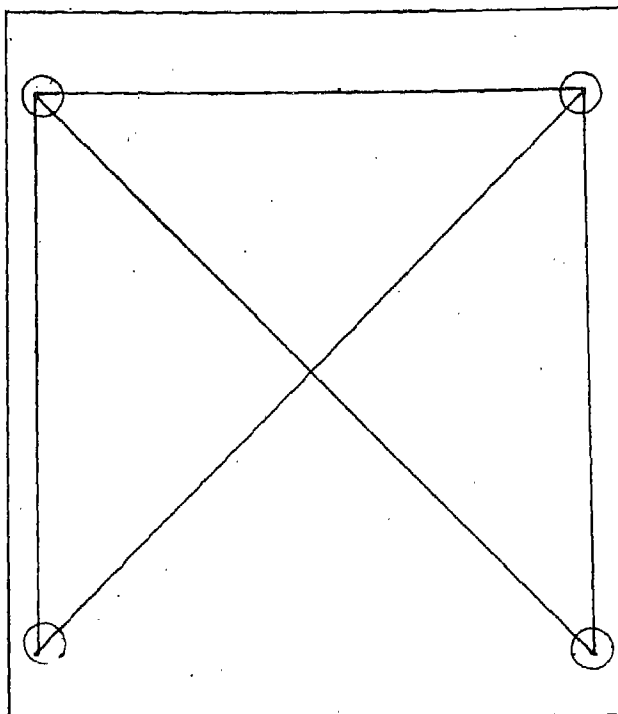


Diagram 4

Variation of Bagho Chheli played with 3 tigers and 11 goats. The same rules are followed - except that in this case the game is played on a triangular. (diagram-3b).

Kato:

It is played with five stones. These stones are thrown down and one is picked up. While tossing this one up, the other four are picked up. The one tossed up must not fall. There are many local variations to this game.

Khondia Puto:

It is played by 2 children as shown in diagram-4

Each player has 2 pebbles. They can move only along the corners and diagonally but since the bridge is broken not

along the side with out a line. When a player gets all four dice, the game ends.

Kan phus phus.

Children sit in a circle. One child whispers the name of a fruit, vegetable or flower into the next one's ear, this is whispered from child to child. The last child announces the word to see if it has come out as it began. They can also go back in the reverse order loudly to try and find out where the alteration began.

Godi lucha luchi.

The children sit in a circle. All of them put their knees up and extend one closed fist in front of the knee. One child has a stone which is to be hidden in the hand of one of the other players. She goes from one to other child trying to quickly put down the stone while singing

Gudi gudi kalo bania bohu

Kaha hatho re ochhikohi na dou.

chup chap maguro mach

kou seulo ru khondie kut.

By this time the stones has been hidden and pressed back to the knee. Then another child is asked to guess where the stone is. If this player guesses correctly she gets a chance to hide the stone otherwise the previous player continues.

Udu udu ma

Talo gutoma

Aalo haurani pitalo sama

Any number of children can play. They sit in a circle with the hands spread out. One child recites the rhyme as he taps each ones hands. Where the rhyme ends the child folds his hand into a fist with the thumbs sticking up and puts it in the centre. The next child on whom the rhyme ends puts his fist on the previous one till all the fists are held one on top of the other. They rise a little and move the fists around while singing the rhyme together.

Outdoor Games for 5 to 8 Year Olds

Luchokali:

Luchokali is played by a number of children. One person is thief and there is den. All children hide while the thief shuts his eyes and counts upto a specified number then, whomever he finds becomes the thief.

Bohu chori is played by two groups of children. One is outside and one inside a specified area.

The home team has to get the bohu whereas the outside team tries to prevent it. One person from the home team goes out at a time, touching the bohu and starts saying kat kat kat without taking a breath and tries to touch the outsiders. If it is done the outsider is 'killed'. They might attempt to bring the *bohu* home when a couple of out-siders are left. But if any out sider touches the bohu she dies and the teams then change places, out siders get a point.

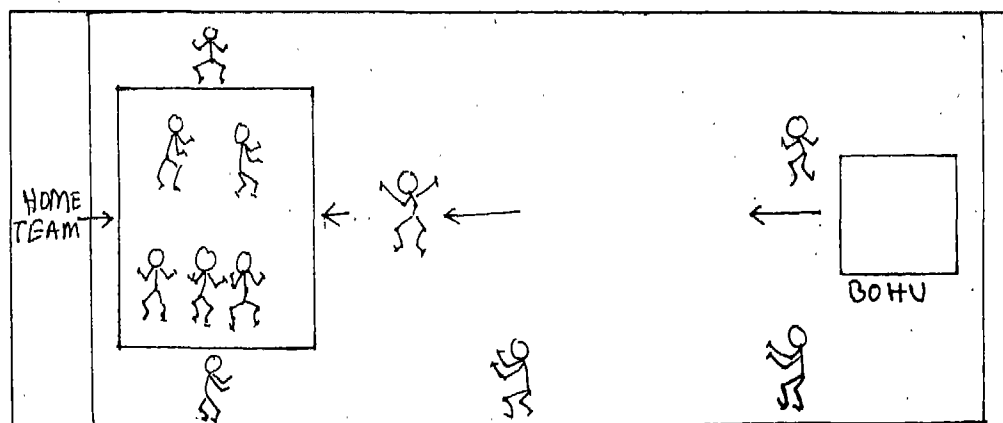


Diagram 5

Kumbhiro to pani re: It is played by a number of children one of whom is the 'kumbhiro'. He stays in the garden while the others stay on a higher level e.g. the verandha. They jump down saying 'Kumbhiro to pani re' and the crocodile tries to catch whoever is caught has to play the crocodile (Kumbhiro).

Variations: Children will jump in the verandah and say 'chaulo dhun chaulo dhun chaulo dhua pani kumbhiro khan'. Then they will jump into the crocodiles area and the crocodile will try to catch them.

Chungdi salu salu: It is a game played by two teams comprising 6 to 7 children each. They sit facing each other at a distance of 15 feet. Each child of a team is given a name not known to the other team whose members also get named. The leader of the team takes turns to cover the eyes of one child of the other team

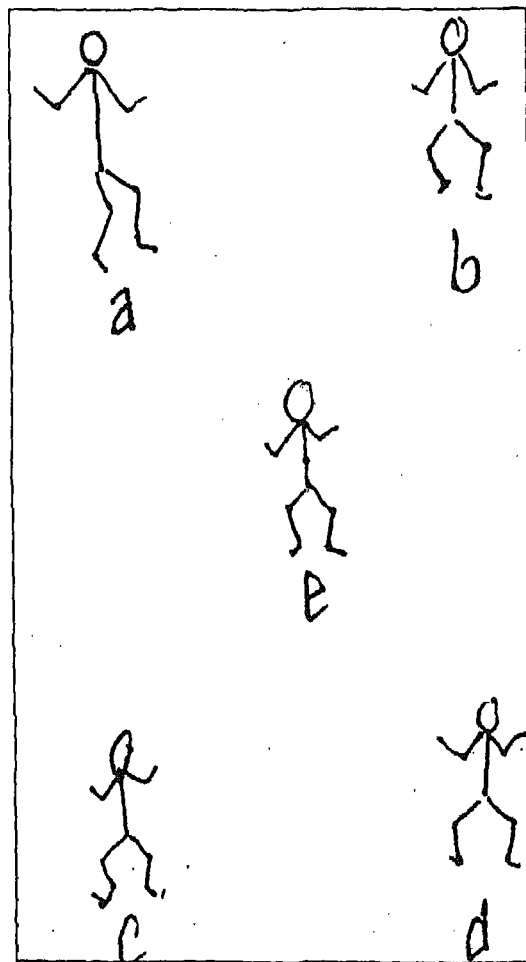


Diagram 6

and call a child from their team by the new name. She comes and knocks on the head of the child whose eyes are covered and returns quickly to take her place. The whole team then sings- 'Chungudi salu salu poko bahu bahu Dali Bhato khau dali bhato khau'.

The child's eyes are uncovered and she has to guess who came and knocked.

Dahi chuda chini:

This game is played by 5 children. One stands in the centre-the thief. The other four stand surrounding him.

All the 5 children will stand in centre and one of them will say "Dahi Chuda Chini" after which everybody tries to go to the four places. One who does not get a place becomes the thief and stands in the centre. Now all four children a b c d will say

Naka tun tun
Haldi Batun
Dahi chuda chini
kadali batun

and change places. The child in the centre (e) has to watch out and get to one of the places. Whoever gets left out becomes the thief.

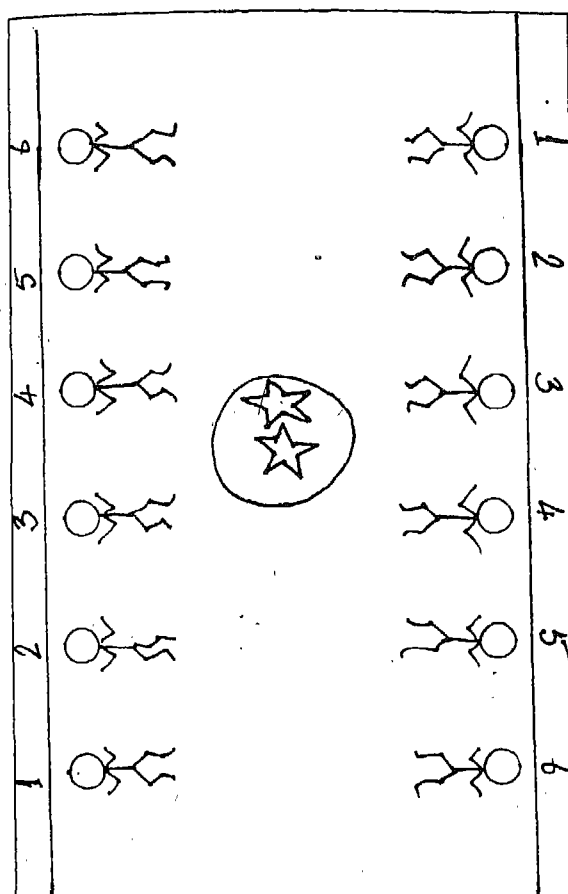


Diagram 7

Kutadi (Kukuda Ladhei):

This game is played by at least 6 children on either side. A circle is made between the two teams in which 2 handkerchiefs are kept. The two teams make 2 lines and the first child from each side goes to take one handkerchief each. Each tries to prevent the other from taking it by hitting him at the back. If they are out they go back to their places and the 2nd set of children come to play. The winning group gains a point. In this way all have their turns. The team that has the maximum points is the winner.

Chhak badi

Chhak badi is played with a minimum of 6 children on either side. Two sticks are placed in between the two teams inside a rectangles. The two teams make two different lines and the first child picks up one stick takes a 8 turn and comes to his place and passes the stick to the next child till it is the chance of the last child who has to run fast, take an 8 turn and keep the stick in its place. The

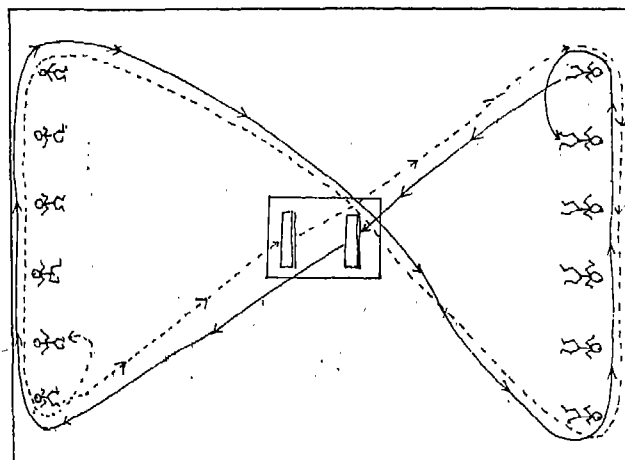


Diagram 8

other team also plays this simultaneously and from among the last two children whoever places the stick on its place first wins the game.

Bisa Amruta:

This game is played by minimum 6 to 7 children. The child who is to be the thief is decided first by one child counting 1 to 7 on the palm of another child. Before he comes to 7 the other child should

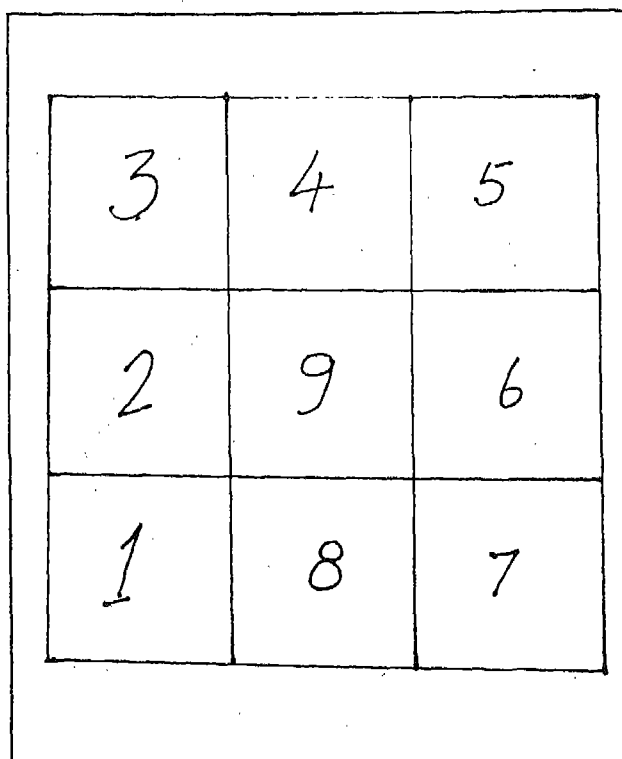


Diagram 9

quickly withdraw his hand so that who is counting is unable to touch the hand.

He continues to do so on all the children till he manages to touch the palm of a child and this child becomes the thief. The thief runs to catch the other children who on seeing the thief or hearing him, sits down and the thief hits their head saying "Bisa". They can only get up when another child hits them on the head and say "Amruta". They can then again take part in the game. If the player is standing when the thief touches him, he becomes the thief.

Hapscoth (chu):

A figure is first drawn on the ground. This game is played by 2 to 4 children. The first child takes a piece of flat stone, and throws it on square

1. If it goes out he is out, and the next child takes a turn. If he is not out he throws the stone and jumps to push on it out of the square, then jumps from 1 to 9. From 9 he has to jump the top of the stone. He has to cover the stone with his foot. He continues with this till he finishes with all 9 squares. When he finishes all of them, from 9 he jumps out. Once outside he picks up the stone asks another player to "stand" or "sit", from front or back straight or horizontal whatever the friend says he has to throw the stone in that direction on to one of the squares. If the stone falls out of the square aimed at he is out, otherwise he makes a cross on the square marking it as his house for the rest of the game. They continue till all the houses are occupied, whoever has more is the winner. If he is out midway then the other children have their turns.

Hopscoth (chata):

A figure is first drawn on the ground. This game is played by 2 to 4 children. Square 5 is for rest. The first child throws a flat piece of stone on square number one jumps on it and pushes it from 1 to 5 via the intermediary numbers. On square 5 he rests, then he pushes the stone/tile from 5 to 8 and 8 to outside the square and from 8 he has to jump and touch the stone with his foot. He continues doing this all over again till square 4. From the starting point he asks his friend "corner"

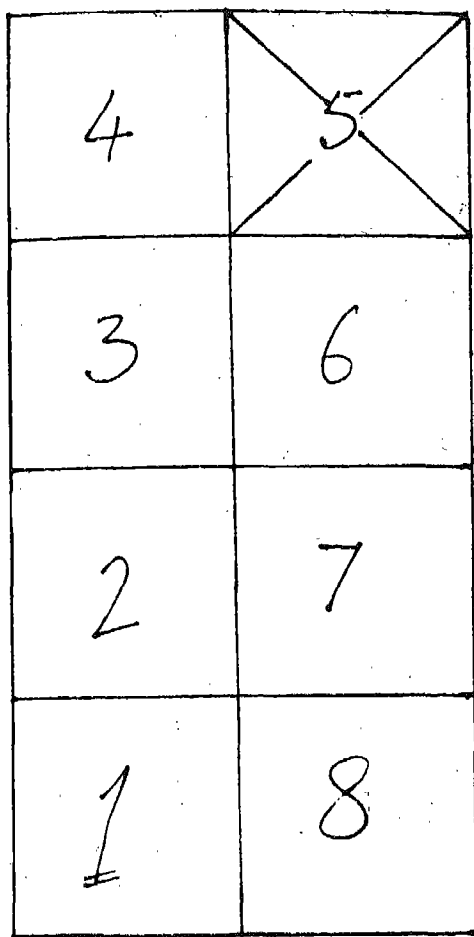


Diagram 10

or "straight". If his friend says "corner" then he stand in a corner near square 1 and throws to square 5. Then he walks upto 5 pushes the stone from 5 to 6 to 7 and then 8 and has to jump from 8 to touch the stone outside. Once outside the child has to throw the stone tile to square 6 to 8 as played above. Then the child has to go up to the front above square 4 and 5 stand up and ask "sit" or "stand", "frontside" or "back side". He does whatever action the friend asks him to do and throws the stone on any of the squares except square 5. The square on which the stone falls the child marks with a cross as his house. He continues playing until he is out, that is, when his stone falls outside the squares. If out he loses a turn and the other child takes a turn.

Guchi Dandu:

This game is played by 2 to 4 children. 2 pieces of sticks one 6 inches long and the other one and half feet long. One hole is made on the ground over which a small stick about 6 inches is kept. One child hits the small stick thrice, by the big stick. The small stick falls at a distance where the second player goes and stands. From there he throws the stick anywhere he likes. From here the distance to the hole is measured player makes that many points.

Then the next child takes a turn. They decide on a score and whoever gets to it first wins the game.

Kathi Loocha Lutchi:

This is played by 2 children. A long base is made of sand, one of the children takes a small stick and with both hands takes the stick through the sand and hides it. The other child watches it. Then the first player folds his hands on top of the sand, and asks the second player to find the stick. If he finds the stick he wins and gains a point. It is his turn to hide the stick and the other child must find it. This continues till 10 points are reached. Then lines are drawn on the sand base and the stick is hidden in one of the lines. The loser closes his eyes picks up sand with the stick and blind-folded throws the sand and stick. He is returned to the place and asked to find the stick. If he cannot find it then he goes again and the whole process continues till he finds it or he is the loser.

Thai Puchi:

This game beginning at 3 years continues upto adoloscence when it becomes a competitive game. The comptitors provoke each other by singing

Kala baigano dhola baigano

kati deli di lahuni

Ama sange je puchi kheliba

Mari debi di kahuni.

The girls gather around and start singing

Thia puchi naranga

Godo duita saranga

Saranga badi ku jaithili

Saranga kolhi anithili

Adhe thila kancha

Adhe thila bhaja

To Bhouni Rani

Mo Bhai raja

Children drop out as they tire. The child left playing is the winner.

Bosa Puchi:

This is played sitting. The legs are kicked out side ways as the children sit on their haunches, They sing as they play.

Puchi ma ghunchi ja

Olia tole luchja

Piajo patar rei pocha pana khai

Ta pachho ku tu pocho

Wabudi podili talo gachacho

Talo gachcho mule dhumana

paisa nahi kauri nahi

Puchi kheluchi magana.

This also like the thia puchi is a competitive game. The last person left playing is the winner.

APPENDIX-I

NATURAL PLAY THINGS AVAILABLE IN THE ENVIRONMENT.

(Contributed by Dr. A.S. Dash)

Nature is the store-house of play and play materials. In nature itself one can collect the most colourful and useful materials to interest and educate the child. The things which adults find useless children find interesting; children notice things which we do not. Many times when parents buy expensive toys from the market the children's interest is only temporary. On the other hand they spend hours playing with mud, stones, water, grass, leaves, sand and the like.

Some of the natural materials like wood and twigs, stones and pebbles, water, clay, sand, paper, bird's feathers, seeds, leaves, fruits, can be used for play and education. Parents and balsevikas can add more points if they try to think. All parents cannot afford to buy toys but they can make lots of toys from the natural materials of which the list is given below.

Water

1. Twirl water with the hand.
2. By throwing water and watching it fall like rain.
3. Note the shape of water by filling it in different shapes of bottles and pots.
4. Taking water in pipes from one place to another.
5. Filling a dropper.
6. Bubbles can be made by putting a little soap in water.
7. Blowing soap water through rubber tubes and straws.
8. Sinking and floating by putting light wood, cork, pieces of iron and rubber into the water.
9. Watching drizzling and heavy rain.
10. Sailing paper boats in water.
11. Watching ice peices into water.
12. Colouring water with different colours.
13. Dyeing white cloths in coloured water.
14. Watching birds' feathers float.
15. Watching ice turn into water.
16. Watching to take out water from a well.
17. Counting the number of waves in the sea.
18. Standing by a river and watching the flow of water.
19. Dipping hands into hot, cold and lukewarm water and knowing the difference.
20. Mixing mud and water to make a thick muddy water.
21. Watching water boil.
22. Knowing the difference of flowing and stagnant water.
23. Watching steam from boiling water.
24. Watering plants.
25. Watching the lid shake when water boils in a container.

Pebbles and Stones

1. Counting stones.
2. Throwing stones into water and counting the ripples and waves.
3. Constructing bridges in a sand pit with stones and pebbles.
4. Building house by (i) putting them in a line (ii) keeping them one on top of the other.
5. Collecting different coloured stones and using them for drawing.
6. Collecting big, small, and different shapes like, square, triangle, flat stones.
7. Standing near the sea shore and throwing them into the wave.
8. Utensils, agarbati stands can be made out of stones.
9. Can be used for weighing.
10. Standing on a high level and throwing big and small pebbles and watching the time they take to touch the ground.
11. Rattles can be made by putting small pebbles into small tins.

Paper

1. Cutting paper according to different sizes, (a) cutting flower and flags.
2. Making paper pipes and funnels.
3. Making boats and sailing them in a basin of water.
4. Making paper containers and bags.
5. Flying a kite made of different colours.
6. White paper dyed in different colours.
7. Decorating the house with flowers cut out of paper.
8. Separating different types of coloured paper.
9. Building small houses.
10. Watching how paper gets soggy when left in water.
11. Drawing maps on paper with cotton and glue.
12. Flying different sized papers.
13. Knowing difference between blotting paper and writing paper.
14. Difference between dry and wet paper.
15. Counting sheets of paper.

Seeds

1. Counting seeds in order (1,2 & 3)
2. Separating the different coloured seeds.
3. Keeping seeds in small tins and empty bottles.
4. Weighing big and small seeds.
5. Recognising the different seeds of different fruits.
6. Sowing seeds and watching how the plant grows.
7. Watching how many leaves sprout.
8. Making beads out of raw bean seeds.
9. Decorating the house with strings made from seeds.
10. Putting them in tins and bottles and counting them.
11. Knowing the different seeds which are eatable.
12. Putting seeds in bottles and weighing them.

Fruits

1. Counting fruits.
2. Knowing the different eatable fruits.
3. Recognising sweet and sour fruits.
4. Knowing the different colours of fruits.
5. Weighing the different fruits.
6. Carrying fruits in a basket.
7. Separating the ripe and raw fruits.
8. Knowing the different seasonal fruits.

Mud and Clay

1. Mixing mud and water and making a building and its walls.
2. Making roads out of mud and clay.
3. Mixing mud and water to make bricks.
4. Making cooking ovens from mud.
5. Making different types of cooking utensils like plates, bowls etc.
6. Making pots and tanks to keep water.
7. Making different dolls from clay.
8. Making different statues and colouring them.
9. Making small balls and counting them.

Bird Feathers

1. Counting feathers.
2. Keeping different coloured feathers together.
3. Sharpening the feather's end to make a pen.
4. Taking feathers from one place to another.
5. Dyeing the white feathers.
6. Tying them in a bunch.
7. Decorating a room with feathers.
8. Making dolls out of feathers.
9. Putting them in water and watching if they sink or float.
10. Making arrows out of feathers.
11. Watching them fly on a windy day.
12. Making hats with feathers.
13. Making fans of feathers.

Sand

1. Building houses.
2. Building temple in sand.
3. Estimating the quantity and weight of sand in bottles as well as sand boxes.
4. Building caves, narrow paths and digging holes in sand.
5. Filling up holes with sand.
6. Seeing the difference between fine and coarse sand.
7. Making a bridge with sticks and two sand heaps a foot apart.

8. Counting the number of small pots of sand required to fill up a big pot.
9. Throwing sand packed in a cellophane bag into water.
10. Different games played on sea beach:-
 - (i) Rolling
 - (ii) Burying up to the waist
 - (iii) Running, jumping, exercising
11. Distinguishing between wet and dry sand.
12. Making pictures with different coloured sand.

Wood and Twigs

1. Building houses.
2. Human figures, birds, toys etc., can be made out of wood and twigs.
3. Wood and twigs can be used for surrounding a particular place.
4. Constructing table and chairs.
5. Making different utensils used in the house.
6. Collecting small twigs and putting them together.
7. Counting sticks.
8. Constructing bridges.
9. Making shelves, tables, benches by keeping wooden planks on bricks.
10. Drawing pictures on wooden planks.
11. Measuring the depth of water.
13. Comparing big and small, thick and thin, long and short, heavy light wood pieces.
14. Using it as ruler.
15. Making stick pen by sharpening one side of a stick.
16. Long sticks can be made into fishing rods.
17. Long sticks wrapped with threads can be used as curtain.
18. Different small play materials can be made.

Leaves

1. Counting Leaves
2. Floating the leaf in water and seeing if it sinks.
3. Throwing the leaf and watching whether it is going up or coming down.
4. Sorting out small and big leaves.
5. Making utensils out of leaves.
6. Making hats by sticking leaves together.
7. Throwing a leaf on flowing water and watching it go down.
8. Recognising fresh and dry leave.
9. Watching the early morning dew on leaves.
10. Recognition of new and ripe leaves.
11. Knowing which leaves cows and goats eat.
12. Making a plate out of leaves and eating on them.

APPENDIX-II'

DEVELOPMENT OF THE INDIGENOUS TOY INDUSTRY IN ORISSA AND THE MARKETING OF TOYS

A paper read by R.K. Das, Small Industries and Small Business Banking Department,
State Bank of India, Local Head Office, Bhubaneswar at a Seminar on

RURAL TOYS AND TOY MATERIALS IN ORISSA

held on the 6th August, 1980, at the Regional College of Education, Bhubaneswar

The Relevance Of The Toy Industry

Professionals in the field of child development are continually trying to make us aware of the utility of toys in stimulating, among other things, self expression, conceptualisation, deductive and inductive thinking, individual and group problem-solving abilities and social skills in children.

Every concerned worker in the field of social and economic development should be alive to what these professionals are saying because, in a way, they are showing us a way out of our present socio-economic predicament. As a bank employee working in the arena of development of small scale and cottage industries through the provision of finance, I have been repeatedly confronted with problems of many entrepreneurs and artisans in this state which stem largely from a lack of the mental agility to explore, improvise and innovate.

As a lay student of development I like to believe that the scientist—inventor and the innovative entrepreneur come from amongst children whose imagination has been spurred on and developed by playing with toys. I find great similarity between a scientist—inventor in his laboratory and a child engrossed with his playthings.

I find it pertinent here to give an excerpt from economist Amartya Sen's book 'Employment, Technology and Development':

'A technique is', wrote J.D. Bernal in Science in History, 'an individually acquired and socially secured way of doing something; a science is a way of understanding how to do it in order to do it better'. The gap between understanding how something would work and making it actually work can be quite a substantial one, and some of the major problems of technological advance in developing countries seem to arise from difficulties in the translation of science into technology.

Science teachers will immediately appreciate the utility of toys in teaching children the natural laws—take a heavy cylindrical object and a plank of wood and show a child how the cylinder rolls down the plank when one end of the plank is lifted;

the child soon learns that round objects roll down inclines and roll down faster if the incline is steeper. I go further to assert that playing with simple mechanical toys such as tops, marbles, building blocks, scissors, wheels, assembly toys, and paper windmills helps in developing technological aptitude.

Further, toys act as a prophylactic against atrophy of the child's (and hence the adult's) natural urge to explore and innovate. In the transference of technology to rural areas extension workers are often defeated by a quiet but chronic rejection of ideas. Would it be too far-fetched to seriously consider using toys for children in rural areas as tools to combat the reluctance of the next generation of farmers and artisans to accept novel equipment, materials and methods?

But toys, to have any impact, must reach the children. And the only agencies which may buy toys for the children are parents, the majority of whom have very little purchasing power, and the government departments running or aiding pre-primary creches and primary schools. The government departments are yet to convince themselves that investment in children, especially smaller children, will pay worthwhile dividends. Any effort to take toys to children must, therefore, engage itself first with the winning over of these agencies. A first practical step would be to produce cheap and durable toys in quantity. Parents confronted with a local supply of cheap toys may spontaneously buy toys. To make the government buy toys we must recruit convincing advocates. But the snag in this simple model is that there must be buyers before toys are produced in quantity, and we find ourselves with the proverbial problem: which is to come first, the seed or the tree. I have, later in this paper, outlined a model which may overcome this difficulty.

Developing the Toy Industry in the Village Industry Sector:

In view of the constraints of cost and distribution and because artisans are decentralised and their minimum requirement of income is low it would be good strategy to develop the toy industry in the village industry sector. My friend Dr. A.S. Dash of the Psychology Department of the Utkal University has shown me a number of samples and designs of educational toys. With a few modifications many of these toys can easily be made by the handicraft artisans, potters and carpenters of this state.

Systematic and sustained promotion of the indigenous toy industry would also lead to some economic activity which should have a multiplier effect and help us in tackling the problem of growing under-employment of skilled artisans in the rural areas.

The Present Position:

In Orissa cheap musical toys, clay animals and dolls, wooden toys, papier-mache toys and masks are sold mainly at melas. These toys are very fragile and do not last for more than a day or two and are really bought as a part of the festivities. Parents rarely buy toys during other times.

Whatever durable toys are being made out of brass, bamboo and wood by the village artisans are being sold (if the artisans are lucky) as handicraft souvenirs through the Orissa Co-operative Handicrafts Corporation (OCHC).

Areas Having Artisans with Toy Making Skills:

Orissa has a sizable artisan population with a wide geographical spread. While almost all artisans can use their skills to make toys those specially suited are:

- * Potters spread throughout the state who could make toy terra-cota pots, bowls, animals and bricks;
- * papier-mache artisans of Raghurajpur (Puri district) and Cuttack who presently make toy animals with nodding heads;
- * papier-mache artisans of Jeypore (Koraput district) who make large animal masks on light bamboo frames for the chaitya festival;
- * horn workers of Parlakhemendi (Ganjam district) and Cuttack who can make tops, counting rings, beads and toy animals out of horn;
- * puppet makers of Balasore, Dhenkanal and Keonjhar;
- * wood carvers of Cuttack, Baramba-Narsinghpur (Cuttack district), Karadagadia (Puri district), Bargarh (Sambalpur district) who make carved wood toys and masks;
- * carpenters of Cuttack, Pipili, and a number of other centres who can make wooden blocks, and assembly toys such as trucks, buses, houses carts, etc., from planks of cheap timber.
- * wood turners of Khandapara (Puri district), Baramba-Narasingpur, Gondia and Bhubari (Dhenkanal district) who can turn out measuring cylinders and bowls, counting discs, beads, rings on the simple hand operated lathes;
- * metal workers of Tarbha (Bolangir district) who can make toy utensils from cheap white metal and aluminium;
- * ganjappa card painters of Sonapur (Bolangir district) and Raghurajpur (Puri district);
- * brass workers of Belaguntha (Ganjam district) who make flexible brass fish.

This list is based only on my personal knowledge. There may also be more centres in the state with artisans who make or can make toys. Persons interested in Odissi toys and handicrafts could obtain more comprehensive information from:

The Joint Director (Handicrafts)

Industries Department,

EPM Building in between State Co-operative Bank Building and Mosque, Sachivalaya Marg, Bhubaneswar.

OR

Managers (Cottage Industries) of the District Industries Centres.

OR

The Orissa Co-operative Handicrafts corporation (Near State Electricity Board Office)

Saheednagar, Bhubaneswar.

Raw Materials for Toy Making:

Raw materials available to Orissa artisans and suitable for toy making are:

- * sea shells
- * fibres-sisal, jute, banana fibre
- * clay
- * paper and paper pulp
- * wood-sisso, gambhari, giringa, katrang; tentera, kasi, simul, kuruma
- * bamboo
- * feathers
- * metal-brass, aluminium, mild steel plate
- * saw dust
- * grass stalks.

China clay and fire clay are very potential materials (to make durable marbles, small building bricks, geometrical shapes etc.,) which can be produced and supplied to artisans.

Developing the Toy Industry - A Suggested Model

Our twin objectives of developing the toy industry in village industry sector in Orissa are:

- (i) decentralised production and supply of toys, the greater portion of which should be cheap and durable so that parents, pre-primary schools, balwadis and primary schools will increasingly buy the toys for children; and
- (ii) creating a growing and remunerative market for toys that reaches out to numerous artisans of the state, and providing the artisans with finance and technical guidance to purchase and use appropriate hand tools and power tools: suitable raw material and new designs, so that artisans, even those presently under employed can take full advantage of the market.

The two forces we can harness for our development model are:

- (i) the 'PULL' of demand for traditional and educational toys that are to be produced by the artisans; and
- (ii) the 'PUSH' of increased production of toys made by artisans.

Since the economy has not been able to provide a sustaining PUSH - PULL for rural toys, the task of generating a strong PUSH - PULL depends upon the agencies concerned with child development and the uplift of artisans.

The initial PULL can be provided by, say, the OCHC's siphoning off from the artisans the present production of toys suitable for increased production. The initial PUSH can be given by inducing artisans to produce (against orders) modified and new toys from prototypes and designs.

The development spiral as perceived by me is:

As a first step a group of properly briefed surveyors should tour the districts carrying with them designs and samples of toys which can be made by the artisans using the techniques and raw materials available to them. During visits to the artisan clusters, the surveyors should simultaneously collect handicrafts having toy potential and discuss with the artisans whether the latter can produce the toys illustrated in the designs and samples. I understand Mrs. Khurana, the director of the NCERT project on RURAL TOYS AND TOY MATERIALS IN ORISSA, has already engaged two field investigators for this purpose. She could equip them with toy designs and samples when they go into the field.

The Psychology Department of the Utkal University could also take up the job especially as it is conducting similar projects of its own.

The State Bank can also help in the survey by asking the field staff of its branches to assist surveyors. Arrangements for this can be made with the Development Manager (Small Industries and Business), State Bank of India, Local Head Office, Bhubaneswar.

The General Managers and Managers (Cottage Industries) of the DICS should also be able to give valuable assistance to the Survey.

Prototypes of educational toys should be produced from designs collected by Mrs. Khurana from the NCERT, the Psychology Department and from any other interested quarters. The production of prototypes could be executed through artisans and carpentry units in and around Bhubaneswar. The following agencies and artisans could help:

- * Handicrafts Production Centre.
Industrial Estate, Bhubaneswar.
- * Panchayat Carpentry Unit at Pipili.
- * The K & VI Board's Ceramic Unit at Udyogpuri near the Bhubaneswar aerodrome.
- * Orissa Instruments, Industrial Estate, Cuttack.
- * Potters of Kapileswar near the Lingaraj Temple.

The prototypes should be taken to the artisans on an ongoing basis by the field investigators.

The collected traditional toys and prototypes of toys to be developed should be examined by a DECISION GROUP which could include:

- * the Director of Industries
- * the Joint Directors of Industries in charge of Panchayat Industries and Handicrafts.
- * the Secretary, OCHC
- * The Director, Export Promotion and Marketing
- * Mrs. Khurana
- * a child development specialist from the Education Department or from the Utkal University.

This DECISION GROUP could finalise which toys can and should be produced and marketed. On the decisions of this group, the OCHC should create the initial pull by purchasing the selected toys WITHOUT much concern for the immediate saleability. These toys could be offered for sale by the OCHC through its emporia in the state and in Delhi.

The initial push of production could be organised by involving the DICs. To do this the OCHC could route orders to the artisans along with samples and designs through the DICs. The DICs in turn could organise the production and procurement at artisan level and, simultaneously, arrange for finance from banks, provision of improved tools and equipment, suitable raw material, and, if necessary, training.

There is great potential in the state for production of wooden toys. Turned wood ('kunda') toys, beads, cylinders, discs, bowls, vases, chess pieces, etc., have both toy potential and decorative value. Simple wood turning lathes powered by electric motors could easily be introduced at selected centres in Cuttack, Puri and Dhenkanal districts. These products will be durable and relatively cheap. Further, bulk production will be possible. Many of these products could also be sold outside the state and exported as well.

Carpenters equipped with adequate hand tools and, wherever possible, with powered circular saws, fret saws and sanders could produce wooden blocks, geometrical shapes, toy cars, buses, trucks, wheelbarrows and houses. Many of these toys could be of the assembly type. I feel the OCHC will not face difficulty even in the initial sale of these toys.

Pottery also provide scope. Small terracota building bricks (say 1 inch by 1 1/2 inches by 2 1/2 inches) could be produced in bulk by traditional brick makers and potters.

Some of the new toys to be designed could be improved versions of popular traditional toys as these would have local buyer appeal. This would reduce the problem of distribution to an extent parents would buy the toys from the artisans directly or from the local village hats.

Finance

The Orissa State Financial Corporation, the State Bank, the nationalised commercial banks and the Regional Rural Banks have loan schemes for artisans and village industries. These financial institutions together have an impressive network of branches in the state and give high priority to the financing of village artisans.

The State Bank which has already financed about 14,000 village industry units is now giving comprehensive finance to artisans to build, repair, renovate worksheds to purchase equipment and tools, to purchase raw material, to meet sustenance needs of the artisans, to purchase bicycles, to electrify worksheds and machinery, and for contingency consumption requirements. As the financial institution with the largest branch network, the State Bank is ready to finance any group of artisans within the area of operations of its branches provided the artisans have a remunerative market for their products.

If intensive toy production is to be organised at any artisan centre within the area of operations of its branches, the State Bank is prepared to provide the necessary finance.

Marketing of Indigenous Toys

As I have already pointed out, the only toys that rural parents buy at present are the very cheap coloured paper and clay toys at melas.

Even in the larger towns and cities of the state there are very few shops selling toys, and these few shops invariably sell on a high-price low-volume basis: they procure small quantities of plastic and metal toys from Delhi and Calcutta, and sell these at high prices to a limited number of relatively affluent parents.

Since it is our objective to develop the local toy industry with an aim to provide cheaper toys for wider use, we should adopt a LOW-PRICE HIGH-VOLUME marketing strategy. A low-price high-volume strategy will be all the more relevant if we want the government departments and other agencies running creches and primary schools to buy toys for the children.

To create a market to absorb a low-price high-volume toy production in the artisan and village industry sector we must have good product planning, a sustained advertisement campaign, sales promotion and appropriate distribution.

Categorising toy buyers into two broad classes-

(i) parents and (ii) government departments and other agencies - I suggest two marketing approaches.

For parents the accent should be on product planning for toys attractive to both parents and children, advertisement and a distribution system which confronts parents with a supply of toys:

Product Planning

- * the toys should be easily recognised as toys by the parents and should be attractive to children;
- * the toys should be durable and should be able to hold a child's interest for a longer period of time;
- * some of the toys could be improved versions of already popular traditional toys;
- * the toys should be cheaper than the plastic and metal toys now available.

Advertisement

- * specialists could bring out in the Oriya dailies and women's magazines simple articles on the utility of toys and where to buy interesting indigenous toys;
- * a regular feature on toys could be broadcast over the radio (as is being done for agricultural information).

Distribution

- * The OCHC could procure the toys from the artisans and offer these for sale at centres in the state where it has its emporia so that, at least, some parents at these centres can buy the toys. It could also advertise the toys in children's magazines.
- * As a second step, each emporium of the OCHC could be instructed and authorised to open a stall for toys at every important mela or jatra held in its locality.
- * Artisans making toys could be encouraged to take a portion of their production to village hats and melas.

For the government departments and other agencies running or aiding creches and primary schools the accent should be on product planning for educational toys, a sales promotion lobby, and a distribution system to match the needs of the institutional buyers.

Product Planning

- * The design for the educational toys should be selected keeping in view low cost and bulk production.
- * A manual should be prepared for the use of these toys.
- * The production should be planned at centres permitting easy procurement.

Sales Promotion

- * A Sales Promotion Group could be formed to convince the concerned government departments and other agencies that toys are essential for child development and should be purchased for use in the creches and primary schools.
- * This Sales Promotion Group could include representatives from the NCERT, SCERT, and the OCHE. Shri S.B. Mohapatra, Director, Export Promotion and Marketing, could take the initiative in forming this Group because, apart from his official role, he is keenly interested in toys and handicrafts and is personally concerned for the uplift of Oriya artisans.
- * The Group could place before the potential institutional buyers samples of toys along with price lists and instruction pamphlets for proper use of the toys.

Distribution

- * Initially the OCHC could procure the educational toys, pack them suitably and centrally supply the toys from Bhubaneswar.
- * Subsequently the district based education authorities and institutions may purchase the toys from the emporia of the OCHC and the Gramudyog Marketing Societies organised by the DICs.
- * Finally the creches and primary schools may be authorised to directly purchase their requirement of toys from the Gramudyog Marketing Societies or artisans.

The marketing of toys need not (and for the long term benefit of artisans, should not) be confined to the state. The Directorate of Export Promotion and Marketing and the OCHC should work out strategies to market toys outside the State and, if possible, to export some of the toys.

Permanent Display Centers

To make teachers, high officials, political leaders and other opinion leaders aware of the social utility and economic potential of indigenous toys there could be PERMANENT DISPLAYS of these toys at the Regional College of Education, the Handicrafts Museum and the Sookhana Bhavan at Bhubaneswar.

Conclusion

We have a desperate need for problem-solvers to help us tackle the overwhelming problems of this state, and give us viable methods to go forward. To get these problem-solvers we have to invest in children.

We must, with vision and perseverance, nourish their spirit of inquiry and provide them an environment which will foster imagination and creativity.

We must give more attention and resources to pre-primary and primary education. To this end toys will be valuable tools whose production will give a new lease of employment to our artisans.

If we try hard enough we may be able to build up a viable decentralised toy industry. provide our children and make Orissa the toy producer of the country.

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- SEN, A. (1975), *Employment Technology and Development*, (London, Oxford University Press)
- ILO (1968), *Creating a Market*, (Geneva, International Labour Office)
- MYRDAL, *The Challenge of World Poverty*, (Harmondsworth, Penguin Books Ltd.)

APPENDIX-III

NAMES OF RESOURCE PERSONS CONTACTED

Sl. No.	Name of Resource Persons contacted	Area of specialisation
1.	Mr. Sankar Moharana At/P.O: BARAGARH Dist: Sambalpur	Wooden dolls, Animals etc.
2.	Mr. Pal Bharat Shilpa Mandir At/P.O: Baragarh, Dist: Sambalpur	Clay figures, statues of gods and goddesses.
3.	Mr. Ananta Rana, Bharat Shilpa Mandir, At/P.O: Baragarh Dist: Sambalpur	Clay dolls.
4.	Mr. Lal Shaheb Moharana, Baragarh, Sambalpur	Wooden toys.
5.	Mr. Rajeev Lochan Mohapatra, At/P.O: GOGUA Dist: Sambalpur	Clay fruits, mask, wooden dolls.
6.	Smt. Gouri Rana At/P.O: Barapalli, Dist: Sambalpur	Teracotta toys.
7.	Mr. Ghasiram Rana At/P.O: Barapalli, Dist: Sambalpur	Teracotta toys
8.	Mr. Timan Rana, At/P.O: Barapalli Dist: Sambalpur	Teracotta toys.
9.	Mr. Jagannath Mohapatra, At: Raghurajpur P.O: Chandanpur, Puri	Mask, Wooden toys.
10.	Mr. Raghunath Mohapatra, Raghurajpur, Puri	Papier mache toys.
11.	Mr. Shiva Prasad Barik Puri Town, Puri	Sea shell.
12.	Mr. Abhimanyu Mishra, Sea shell work shop Rama chandi sahi, Puri	Sea shell work.
13.	Ms. Sushila Kumar Sen, Mahila Kutir Shilpa Shikhyashram Kacheri Road, Puri	For cloth dolls, animals, wheel toys.
14.	Mr. Surendra Bajarshingh, At/P.O: Ghoradia Near Motari Station, Puri	Soil images, dolls wooden scenery and cloth arts.

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| 15. Mr. Bijoy Kumar Routray,
Doctor Lane,
Khurda, Puri | |
| 16. Mr. Braja Kishore Jena
C/o Lokanath Jena
Banpur, Puri | For bamboo work. |
| 17. Mr. Raghunath Sethi,
Achut Raju Pur, Banpur, Puri | For cane work |
| 18. Mr. Lokanath Pradhan,
Nandisahi, Gurujanjha,
Khurda, Puri | Images and dolls. |
| 19. Secretary
Shakhigopal Mahila Industrial
Co-operative Society,
Shakhigopal, Puri | Flower basket, clay models and fruits |
| 20. Mr. Ghana Parida
Bhuvan Chitralaya, Itamati,
Puri | Dramatic ornaments. |
| 21. Mr. Gangadhar Nayak
Gokipatna sahi, Tangi, Puri | Specialist in painting and clay material. |
| 22. Ramachandra Moharana,
Carpenter, Shandhasahi
At/P.O. Tangi, Dist: Puri | Wooden toys and play material. |
| 23. Smt. Subashini Moharana,
C/o Shiva Moharana,
Gandhinagar,
Odagan, Puri | (Godisahi)
Clay dolls. |
| 24. Ms. Sudarshana Moharana,
At: Kashabadi, P.O.: Kalbalpur
Via: Odagon, Dist: Puri | For limestone toys. |
| 25. Mr. Bhagwan Mohapatra,
Kumbhar sahi, Khgansapara,
Puri | For wooden puppets, dolls etc. |
| 26. Mr. Modan Mohan Das,
Bazar sahi
At/P.O.: Odagon, Dt. Puri | Wood carving and Stone carving. |
| 27. Mr. Laxman Mohapatra,
Nayagarh, Puri | Sola pith work. |
| 28. Mr. Kashinath Mohapatra,
Daspalla town, Daspalla (Puri) | Clay models and toys and wooden toys. |
| 29. Mr. Prafulla Kumar Mohapatra,
C/o Jaganath Mohapatra,
Daspalla Town, Puri | -do- |
| 30. Mr. Kashinath Mohapatra,
Kumbhar sahi, Khandapara,
Puri | Wooden toys and carving. |
| 31. Mr. Sanatan Mohapatra,
Kumbhar sahi, Khandapara,
Puri | Wooden puppets. |

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| 32. Mr. Kulamani Patra,
Kumbharasahi
At/P.O.: Khandapara, Garha,
Puri | Wooden containers Glass and Ashtray etc. |
| 33. Mr. Bhagirathi Patra,
Khundhura sahi, Khandapara,
Puri | Wooden containers, glass ashtray etc. |
| 34. Mr. Gopinath Mohapatra,
Kumbhar sahi Khandapara,
Puri | Signboard, wood carving etc. |
| 35. Mr. Jogi Pradhan,
Mangala Sahi,
At/P.O.: Nayagarh, Puri | Paper mask. |
| 36. Mr. Sura Manjhi (Tuni)
At: Kulbira, P.O.: Kulabira,
Dist: Sundargarh | Drums, pakhaja etc. |
| 37. Mr. Shankar Singha, Kulabira
Tota (Titapara) S.N.G. | -do- |
| 38. Mr. Shadhuram Singha
At/P.O.: Lephripara,
Dist: SNG | Musical industry etc. |
| 39. Mr. Pramod Ku. Majhi,
At: Sianhabahal.
P.O.: Tasaladihi, Dist: SNG | Bamboo, paddy materials |
| 40. Mr. Sankritan Pradhan.,
At: Singha bahal
Tasaladhi, Dist: SNG | -do- |
| 41. Mr. Sadasiva Majhi, Uditnagar
Baha colony, Raurkela, SNG | Coloured baskets, hair clips. |
| 42. Ms. Chhayabati Pradhan,
At: Khuntamunda,
Vjalapur, Dt: Sundargarh | Expert in making Goldengrass. |
| 43. Mrs. Pirabati Pradhan,
C/O Abhina Pradhan,
At: Khunta Munda
P.O: Vjalpur, Dt: Sundargarh | -do- |
| 44. Mr. Champabati Patel,
Shruguda Dist: Sundargarh | |
| 45. Mr. Diniel Mindo Art Teacher,
B.S. High School, Sundargarh | |
| 46. Mr. D.P. Singhdeo,
Personal Officer,
B.S.E. Co. Ltd., Biramitrapur,
Sundargarh. | Clay toys and animals. |
| 47. Mr. D.N. Panigrahi, S.D.O.
Electric Investigation,
Cinema Road, Sundargarh | Wooden toys. |
| 48. Mr. Bibishana Moharana,
Moharana Sahi, Khairpadar
Via: Dharmagarh, Kalahandi | Wooden toys. |

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| 49. Mr. Murli Moharana,
Moharana sahl, Khair podar,
Daramagarh, Kalahandi | Educational wooden toys. |
| 50. Mr. Bihar Lal Moharana,
Khairpadar, Kalahandi | Masks. |
| 51. Mr. Turi, Rampur,
Dt. kalahandi | |
| 52. Mr. Bishnu Rana, Junagarh,
Dt. Kalahandi | Bake clay toys. |
| 53. Mr. Baikuntha Rana,
At/P.O.: Junagarh,
Dist. Kalahandi | Baked clay toys. |
| 54. Mr. Ghaneswar Dalei,
Champakhari, Malkangir,
Koraput | Arrow and bow |
| 55. Mr. Rajendra Moharana,
Vill: Champakhari
P.O.: Malkangir, Dt: Koraput | Wood works |
| 56. Mr. Gopinath Mohapatra,
Nuasahi, Jeypure, Dt: Koraput | Clay figures, dolls. |
| 57. Mr. Govinda Mohapatra,
Nauasahi, Jeypure, Dt: Koraput | -do- |
| 58. Ms. Simachala Mohapatra,
Nuasahi, Jeypore, Koraput | -do- |
| 59. Mr. Gopateswar Mohapatra,
Nuasahi, Jeypore, Koraput | -do- |
| 60. Mr. Gouranga Das,
Kumbaharput,
Via: Umerkote, Dt: Koraput | Baked clay toys |
| 61. Ms. Sima Roy,
D.N.K. Rehabilitation Project,
Umerkote, Koraput | Cardboard cloth dolls. |
| 62. Ms. Bathini Roy, D.N.K.
Rehabilitation Project,
Umerkote, Koraput. | Cloth fruits. |
| 63. Mr. Ranga, At: Hatvarndhi
P.O.: Umerkota, Dist: Koraput. | Baked Utensils and Bull. |
| 64. Mr. Srihari Das, Raighar,
Dt: Koraput | -do- |
| 65. Mr. Dora, Kotpad, Dt: Koraput | Drama and musical instruments. |
| 66. Mr. Kanshari Famil,
Navarangapur
Dt: Koraput | Lacquer toy. |
| 67. Mr. Shankar Rout,
Umerkotahat, Koraput | Limestone |
| 68. Mr. P.K. Pattnayak, Artist
S.S.G. High School,
At/P.O. Umerkote,
Dist: Koraput | Art, painting. |

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| 69. Mr. Babaji Moharana
At/P.O.: Jamundia,
Dt: Balasore | Clay & laquer toys. |
| 70. Ms. Sudarshana Moharana,
At: Tartua, P.O.: Iswarpur,
Dt: Balasore | Lime stone carving. |
| 71. Mr. Amitava De.
C/o Kalidas De.
Dewanpara, Sunhat, Balasore | Clay dolls, wall hangings, toys. |
| 72. Mr. Nila Kantha Das,
At: Gobarghata,
P.O.: Laxmannath Dt: Balasore | Clay models. |
| 73. Mr. Bijay Kumar Das,
C/o Ramesh Ch. Das,
At: Damodar Pur,
P.O. Motiganja, Dist: Balaspore | Wooden wheel, toys, puppets. |
| 74. Smt. Bashanti Sen,
At: Barabati, Balasore, Balasore | Lacquer toys. |
| 75. Mr. Ranjan Moharana, Nilagiri
Industry, Nilagiri, Balasore | Wooden works. |
| 76. Mr. Parshuram Sahoo,
Silpamandira, Janta Hospital
Road, Berhampur, Ganjam | Masks, shell work |
| 77. Ms. Kalayani Adhikari,
Ajanta Chitralaya, Berhampur,
Ganjam | Masks, Shellwork |
| 78. Mr. Brundaban Moharana,
Betelnut toy training centre,
Choudhury colony, Aska,
Ganjam. | Betelnut works. |
| 79. Mr. Robita Sasmal,
Betelnut toy training centre,
Aska, Ganjam | -do- |
| 80. Mr. Prashana Kumar
Shamantraya,
Betelnut toy training centre,
At/P.O.: Aska, Dist: Ganjam | Betelnut work. |
| 81. Mr. Dasharath Moharana,
Bada danda sahi,
At/P.O.: Parala Khemundi,
Dt: Ganjam | Horn work |
| 82. Mr. Dusmanta Moharana,
Bada danda sahi,
At/P.O.: Paralakhemundi,
Dist: Ganjam. | -do- |
| 83. Mr. Khageswar Moharana,
At/P.O.: Berhampur,
Dist: Ganjam | Wood carving. |
| 84. Secretary,
Brass Metal Industry Centre,
At/P.O.: Belguntha, Dt: Ganjam | Brass metal works. |

APPENDIX III

85.	Mr. Bijaya Kumar Shamanaraya, At/P.O: Angul, Dt: Dhenkanal	Clay toys and mask.
86.	Ms. Lochana Behera, At: Tangiri P/O: Naojidia, Dt: Dhenkanal	Dhokra works
87.	Ms. Anita Pradhan, At/Tangiri P.O: Bagedia, Dist: Dhenkanal	-do-
88.	Mr. Budhia Sahoo, At/ Tangiri P.O: Bagedia, Dist: Dhenkanal	-do-
89.	Ms. Shyama Moharana, At/P.O: Bagedia, Dist: Dhenkanal	-do-
90.	Nikunja Behera, At/P.O: Kapilasha, Dist: Dhenkanal	-do-
91.	Mr. Bashanta Kumar Nayak, Navahiban Mandala At/P.O: Angul Dist: Dhenkanal	Clay models
92.	Mr. Bika Sahoo, At: Gangiri, P.O: Begedia, Dist: Dhenkanal.	Dhokra toys
93.	Mr. Biswanath Sahu, At: Tangiri, P.O: Begedia, Dist: Dhenkanal	-do-
94.	Mr. Satya Dharma Mehera, At: Balangiri Town, P.O: Bolangiri Dist: Bolangir	Clay toys
95.	Mr. Narasingh Moharana, At/P.O.: Binika, Dt: Bolangir.	Wooden toys
96.	Mr. Sudarshan Sahu, At/P.O: Binika Dist: Bolangir.	-do-
97.	Mr. Bijay Kumar Jain, At/P.O: Tushuria, Dist: Bolangir.	Wooden toys.
98.	Mr. Balaram Moharana, At/P.O. Binika Dist: Balangir.	Wooden work
99.	Raikana Shan, At/P.O: Sonapur, Dist: Bolangir	-do-
100.	Mr. Tohari Pradhan, At: Pajigulla Thana: Raikia, Dist: Phulbani	
101.	Mr. N. Sahoo, Bikash Kendra, Boudh, Phulbani.	
102.	Mr. Iswar Moharana, Gudubati Padir, Phulbani.	
103.	Mr. Pitabasa Nayak, At/P.O: Gutingia. Via: Gudayagiri Thana: Raikia,	

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| 104. Mr. Arjuna Sahoo,
At/P.O: Tikabali, Dist: Phulbani | Leather and godhi Shake skin for
musical instrument |
| 105. Mr. Krutibasha Nayak,
At/P.O: Gutingir,
Via: Gudayagiri Thana: Raikia,
Dt: Phulbani. | Khanjari, oda. |
| 106. Mr. Teiabana Bindhani.
(Kumbhar), Vill: Paburia,
P.O: Paburia. Via: G. Udayagiri,
Dt: Phulbani | |
| 107. Mr. Sobara Nayak, Galana,
Rudangia. G. Udayagiri,
Phulbani. | Wooden works |
| 108. Mr. Mr. I. Mehar, Roop Bharahi
Boudh, Phulbani. | Clay, Maharaja |
| 109. Mr. Dasharath Pattnayak,
Boudh, Phulbani. | Horn work |
| 110. Ms. Shyama Ihana Nayak,
Samtarai pur Sashan,
P.O: Keonjhar Sadar,
Dist: Keonjhar. | Images and dolls |
| 111. Mr. Nakula Chandra Biswal,
At/P.O: Joda Market,
Kundrunala Primary School,
Keonjhar | |
| 112. Mr. N.C. Biswal,
At: Gopal Bindha, Keonjhar. | |
| 113. Mr. Gopal Chandra Rana,
At: Laxmi Narayana Saho,
P.O: KJR, Dist: KJR. | Mask works and Solo pith work,
Paddy works |
| 114. Mr. Nabaghan Mohapatra,
At: Goursahi, P.O: Keonjhar
Bazar-2, KJR. | Painter, modelling and stone work |
| 115. Mr. Murali Sahoo,
Biswakarma Non-Ferrous Metal
Industry, At/P.O: Kolimati,
Via: Anandapur, Dist: Keonjhar. | Clay animals and birds |
| 116. Mr. Jayadev Pal,
Bengali School, P.O: Joda,
Dist: Keonjhar | Clay modelling and painting |
| 117. Mr. Balidhar Mohapatra,
C/o: Nabasethi, At: Sadhusingh
Hating, Viraja Laundry,
At/P.O: Barbil, Dist: Keonjhar. | |
| 118. Mr. Pramoda C. Jena.
S.T.S. Hari Chandan Pur,
Dist: Keonjhar. | |
| 119. Mr. Pandva Patra,
At/P.O: Kesudar pala.
Via: Anandapur, Dist: Keonjhar | Bamboo work |

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| 120. Mr. Kailash Jena,
At/P.O: Kesudarapada,
Via: Anandpur, Dt. Keonjhar. | |
| 121. Mr. Goutam Chandra Behera,
At/P.O: Barigaon,
Via: Naranopur, Dt: Keonjhar | Clay elephant, horse, deer |
| 122. Mr. Hare Krishna Rana,
Barabajar P.O: Baripada,
Dt: Mayurbhanj. | Specialist in cement doll and images,
sole work, painting etc. |
| 123. Mr. Lal Mohan Mohapatra,
Bara bajar, Baripada,
Mayurbhanja | Solo and paper mache |
| 124. Mr. Ramkrishna Nandi,
At: Jaleswar, Dt: Mayurbhanj | Specialist in shell work |
| 125. Mr. Iswar Ch. Mohapatra,
Sd. Office, At/P.O: Khiching,
Dt: Mayurbhanja. | Clay |
| 126. Kartika Rana, Dewala Sahi,
Chitrakar, Baripda,
Mayurbhanj. | Clay |
| 127. Mr. Nityananda Bhol,
Mallti Sahi, Mangala bag,
Dt: Cuttack. | Bamboo mat, dhokhra work, Wooden toys
and puppets |
| 128. Mr. Baikuntha Nath Behera,
Kathagorha Sahi, Boxibazar,
Cuttack. | Clay |
| 129. Ms. Kalandi Charan Behera,
Mangala Bag, Cuttack. | Horn article, statue |
| 130. Santrapur Brass and Bel. Metal
Co.-op. Society, Santrapur,
Dist: Cuttack | Metal Carving |
| 131. Mr. Prasana Nayak,
At/P.O: Badamba,
Dist: Cuttack. | Dhokra |
| 132. Lalitagiri Stone Carving Co-op.
Society Ltd. Lalit giri, Cuttack | Stone carving |
| 133. Sri Purna Chandra Singh,
Manik Ghosh Bazar, Cuttack-1 | Sol plith work |
| 134. Mr. Dukhishyama Sutar,
At/P.O: Jajpur, Dt: Cuttack | Bamboo work |
| 135. Ms. Nilamani Moharana,
Badhei Sahi, Boxi bazar,
Cuttack-1. | Wood work |
| 136. Mr. Golak Sutar, Kendrapara,
Cuttack. | Wood work |
| 137. Ms. Banchhanidhi Mohapatra,
Master Craftsman,
Wood Carving Centre,
Baramba, Cuttack. | Wood work |

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| 138. Ms. Ullasha Pattnayak,
At/P.O: Athagarh, Dt: Cuttack. | Educational toys, pictures etc. |
| 139. Mr. K. Ch. Nayak,
At/P.O: Kendrapara,
Dist: Cuttack. | Golden grass |
| 140. Mr. Lingaraj Moharana,
At/P.O: Badamba, Dt: Cuttack | Wooden toys |
| 141. Devaraj Moharana,
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Dist: Cuttack. | Wooden toys. |

